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THE ROLE AND PERCEPTION
OF COMPANY BUDGETS

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A thesis submitted to the University of Bristol
in accordance with the requirements for the degree of
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Stephen R. Lyne

ABSTRACT

This thesis examines the rôle and perception of the budget and budget related issues in thirteen medium or large UK companies. The specific issues examined include: the importance given to different rôles of the budget, the existence, sources and consequences of budget pressure, and the degree of participation in the budget setting process.

Chapter 2 is a review of the traditional literature on budgeting. From this review various general propositions have been developed in chapters 4 and 5. Data for this study were primarily obtained by a questionnaire completed by a sample in each company and by interviews with company officials.

Chapter 4 concludes that the budget is primarily seen as a forecast of future performance although there is a sizeable minority who view the budget as a target. The budget is used as a control device but this has not produced unwelcome pressure, in fact a large majority consider that increased pressure would be beneficial. Participation in the budget setting process was not a general feature and there was desire for increased participation.

In chapter 5 three user-groups are distinguished; namely, accountants, senior non-financial managers, and first line managers. The perceptions and attitudes of these user-groups to the issues discussed in chapter 4 were examined in this chapter. There was general agreement that the budget was a forecast and that it was used as a control device. A minority of senior managers indicated that there were budget related incentives, particularly via promotion prospects. Accountants gave less importance to the business oriented objectives. The managers felt that pressure does arise from the use of the budget as a control device, but the greatest source of this pressure is self-generated and thus not likely to cause dysfunctional consequences. All groups sought increased participation, but this was most strongly felt by accountants.

Chapter 6 contains a brief review of four organisational paradigms; namely, contingency theory, organisational power, markets and hierarchies and agency theory. The implications for budgeting from these paradigms were examined and conclusions drawn in chapters 6 and 7. The rôle of uncertainty was particularly important in drawing comparisons between these organisational paradigms and the results of the empirical study.

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PUBLICATIONS AND PAPERS

An early version of the material in chapters 2 to 4, plus some additional material not used in this thesis, has been published in a collection of papers presented at ESRC/CIMA Research in Management Accounting Conferences held at Aston University:

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The material in chapters 2-4 has been published in a similar but condensed form in:

Lyne, S.R. (1988), "The Rôle of the Budget in Medium and Large UK Companies and the Relationship with Budget Pressure and Participation", Accounting and Business Research, 1988, pp. 195-212.

The material contained in chapter 5 has been presented in a paper given at the Research in Management Accounting Conference, Aston University, September 1988, and at the British Accounting Association Annual Conference, 1989, Bath University, entitled:

"Perceptions by Different User-Groups of the Rôle of the Budget, Budget Pressure and Budget-Related Incentives".

MEMORANDUM

Author's Declaration

Except insofar as stated in the acknowledgements to this thesis and in the text itself, the work contained herein is that of the author.

Stephen Lyne

Stephen Lyne

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CHAPTER ONE

INTRODUCTION

Within the literature of management accounting, budgets and the budgeting process has long been a subject for research and comment. There is a considerable body of theory which relates to this area and a smaller body of empirical research. The empirical evidence which relates to the use of the budget and other budget related issues within U.K. companies is relatively small. The primary objectives of this thesis are as follows.

To seek a better understanding of the rôle of the budget in medium and large sized U.K. companies.

To learn more about certain important budget related issues within these companies, particularly the extent of participation in the budget setting process, and the sources and consequences of budget pressure.

To investigate the perceptions and attitudes of different users of the budget to the issues described above.

To relate the findings of the empirical study to the accounting literature and to some important areas of the wider literature on organisations.

The basic structure of the thesis will now be outlined. Chapter 2 contains a review of the 'traditional' accounting literature on the rôle of budgets and budget related issues. From this review various general propositions are drawn in chapters 4 and 5 which form the basis of the empirical study. There are further smaller reviews of relevant literature in chapters 4 and 5 in the places where this is needed.

Chapter 3 describes the methodology that has been adopted in the empirical study. Data for this study were gathered by a questionnaire completed by a sample from each company and by means of an interview with a senior company official. These visits occurred in late 1981 and during 1982. The statistical techniques and methods of presentation of data are also described.

The first part of the empirical study is presented in chapter 4. This deals with the rôle of the budget in the thirteen medium and large sized U.K. companies which form the sample. The objective at this stage is to investigate the issues at the company level and where appropriate to examine the differences that occur between the companies. An investigation into whether there were systematic differences between the companies was attempted, adopting a contingency theory approach.

In chapter 5 the focus changes and the same budget related issues are examined with attention on the perceptions and attitudes of three important user-groups. To enable conclusions to be drawn it was necessary to develop testable hypotheses as to whether there would be differences between the user-groups. This was done for four of the general propositions that had been investigated in chapter 4.

Chapter 6 contains the second main literature review in which a wider perspective on the rôles of budgets is taken. A few representative items from four areas of the literature on organisations are reviewed with the specific objective of ascertaining the implications for company budgets and budgeting practices. The conclusions from this review are compared with the results from the empirical study. This process is continued in chapter 7 where the conclusions of the previous chapters are summarised. At this point certain general conclusions are drawn and implications for further research are noted.

Finally in this introduction two points should be made. First, masculine pronouns have been used throughout this thesis. This policy has been adopted to avoid inelegant English and has no further implication. Second, various acronyms and abbreviations have been used in this thesis; these are explained in the text but are also listed in Appendix 3.

CHAPTER TWO

REVIEW OF THE LITERATURE ON BUDGETS

In this chapter the literature that has a direct bearing on the rôle, purpose and use of budgets is reviewed. The literature on this subject is vast and, thus, this review is not fully comprehensive. However, the major aspects of budgeting that have figured prominently in the literature in the last 25 years or so will be covered.

Later in the thesis, there are sections which include reviews of other aspects related to the rôle and perception of budgets. These reviews are presented at points where consideration of those aspects of the literature will be most helpful to the arguments and evidence being discussed. The final chapter is also predominantly literature-based and considers important contributions from the wider literature on organisations.

2.1 Introduction

The 'conventional wisdom' contained within typical text books on management accounting suggests that the budget has a multi-purpose rôle in business organisations. A brief review of a sample of eight popular texts⁽¹⁾ reveals that the rôles usually include: forecasting, planning co-ordination, communication, control and motivation. These rôles are diverse and, in some instances, apparently incongruent, for example planning as opposed to a motivational target. The text books give little or no consideration to potential conflicts in the rôles they describe. More advanced UK texts do consider these matters in more

detail (e.g. Amey & Egginton (1973), Emmanuel & Otley (1985), Ezzamel & Hart (1987)) but such texts are unlikely to be read by practitioners.

There are two other important aspects of budgeting which figure very lightly, if at all, in many texts; that is actual practice in business organisations and the large academic literature on budgets and the budgetary process. The lack of this material results in such texts being unable to discuss the differences that exist between practice and the academic literature.

Few texts mention more of the large academic literature on budgeting than a few references to classic articles from twenty years ago. Thus many of the most common texts present a view of the budget and budget-related issues which is highly over-simplified and does not attempt to deal with many of the more complex problems as seen by either academics or practitioners. The divergence between theory and practice is an issue which will be raised later in the thesis, but its origins may lie partly in the preceding paragraphs.

Allied to this is the problem that there is a paucity of available material which describes actual budgeting practices. There is an increasing number of studies which shed light on this matter but the words of Scapens still apply:

"Unfortunately the available evidence is very limited; there is no coherent body of literature which describes management accounting in practice ..." (Scapens (1984), p.36).

The remainder of this chapter will review the literature on budgeting and enable six basic propositions to be advanced in Chapter Four. To impose some order on this review, a schema will be used which has been

adapted from Otley (1977), viz:

1. Budgets as targets
2. Budgets as forecasts
3. Managerial use of budgets
4. Budgets as standards for performance evaluation
5. Participation in budget-setting.

This will be followed by a brief review of the empirical work on the use of budgets in UK companies.

2.2 Budgets as Targets

An issue that has been of interest to researchers for many years is whether setting a budget which is difficult to achieve will result in eventual higher performance and, if this is the case, under what conditions will the effect be greatest. In the early decades of this century, F.W. Taylor examined this matter and developed his theories of Scientific Management in which motivation and increased performance are central. In Taylor (1947) (first published in 1911) he describes how the best performance will be obtained by determining the "best way" to do a task and then using this optimal 'budget' as a target against which rewards will be paid for achieving the target. Many criticisms have been levelled against the work of Taylor and his followers (some of whom developed the basic manual labour problems, about which Taylor wrote, to include office work), particularly his simplistic attitude towards motivation and human nature which viewed humans as being almost totally motivated by financial rewards.

Stedry (1960) produced a similar conclusion though by very different means. His laboratory experiment, using college students, examined

different levels of budget difficulty (including no explicit budget) and the links with aspiration levels and performance. The best results were achieved by the group who had been given the hardest budget and allowed to set the aspiration level after having received the budget. Stedry concludes from this that there is evidence in his experiment that business organisations will be able to improve performance by having management set and impose difficult budgets on their staff. The application of these results to business organisations has attracted a great deal of criticism. Part of this concerns the specific conduct of the experiment (e.g. a key question which was ambiguous and the lack of an adequate feedback mechanism) but perhaps more important is the difficulty of transferring results from a laboratory experiment, which made no pretence at being 'the real world', to the environment of a business organisation. However, it is the implication that imposed budgets may be better than participative ones which has drawn much more criticism than the implication that difficult budgets can improve performance.

Stedry followed up this laboratory experiment with a field study which examined similar issues. Stedry & Kay (1964) report that difficult goals led to performance which was either very good or very poor. They explain this by means of aspiration levels. As long as the budgetee believes he can attain the budget target it will continue to motivate, but if this target is seen as impossible, the aspiration level will dramatically fall and there will be no motivating effect from the budget.

Certain other writers have advanced a similar direct relationship between targets and performance. E.A. Locke, who conducted a series of experiments on this issue, concluded:

"The results are unequivocal. The harder the goal the higher the performance" (Locke (1968) p.162).

Similarly, Turcotte (1974), who investigated control systems in two public sector organisations, concluded that it was precise, demanding and widely understood objectives which were instrumental in producing high performing agencies.

Bryan & Locke (1967) summarise some of their earlier work in three statements:

- (a) Specific hard goals produce a higher performance than a more general goal of "do your best".
- (b) Hard goals produce less overall task liking than easy goals.
- (c) Specific hard goals produce more interest in the task than a general goal of "do your best".

They then present the findings of another experiment which indicated that, from a position of initial low motivation, specific hard performance goals:

- (a) raised motivation;
- (b) raised performance;
- (c) increased favourable attitudes.

Ivancevich (1976) tested the hypothesis that multiple hard goals would produce more effective performance from a sample of the sales force of a large US company. The hypothesis was confirmed. It is of particular interest that the sample was of sales force personnel who frequently are faced with control through targets yet have rarely formed part of any field experiment reported in the accounting and related literature.

There are a number of other reports that confirm this basic view of the effects of a difficult-to-achieve target, but which add some form of qualification. Hofstede investigated the issue of the budget as a target in a number of Dutch companies. He concluded:

"[Budgets and standards] will have a more positive effect on motivation when they are tighter and less easily attained. This works up to a certain limit: beyond this limit tightening of standards reduces motivation". (Hofstede (1968) p.160).

This result has been seen or predicted by other writers (e.g. Stedry & Kay (1964) and Ronen & Livingstone (1975)) and has been explained by different theories. It is generally accepted that there will be a cut-off point beyond which a difficult budget will no longer produce better performance; in fact, performance will deteriorate rapidly.

Carol & Tosi (1970) in their study of a 'management by objectives' scheme found that multiple goals did not produce negative results and that different personality characteristics of the managers were important. This is summarised in a subsequent book:

"However, difficult goals were associated with increased effort among managers with high self-assurance, managers who associated their performance with the reward system and mature managers". (Carol & Tosi (1973)).

Cherrington & Cherrington (1973) investigated the relevance of Skinner's Reinforcement Theory to budget targets by conducting a laboratory experiment using college students. The conclusion of their experiment was that an imposed, difficult budget did produce significantly higher performance especially when appropriate reinforcements were

given. Cherrington & Cherrington conclude that the reinforcement contingencies are critical to the success of the budget as a motivational device:

"Careful thought and attention need to be given to the various forms of reinforcement and reward contingencies both stated and implied in the budgeting process". (Cherrington & Cherrington (1973) p.252).

Cherrington *et al* (1971) consider the nature of possible reinforcement contingencies and stress the need for rewards to be positively contingent on the desired performance (e.g. attaining the budget target).

Finally in this section, Ronen & Livingstone (1975) have presented an Expectancy Theory model developed from House (1971), and they discussed its implications for a budget-setting situation. The basic formulation of the model is :

$$M = IV_b + P_1 (IV_s + \sum_{i=1}^n P_{2i} EV_i)$$

where

M = motivation to work

IV_s = intrinsic valence associated with successful completion of task

IV_b = intrinsic valence associated with goal directed behaviour

EV_i = extrinsic valence associated with ith extrinsic reward

P₁ = expectancy that goal directed behaviour will accomplish the work goal

P_{2i} = expectancy that accomplishment will lead to the ith extrinsic reward.

This theory suggests that high budget targets can produce high performance if correctly linked to a reward structure. However, this relationship will hold subject to:

- (a) P_1 remaining high, i.e. there is still a reasonable expectancy that the target can be met.
- (b) P_{2i} has a high value. This links with the previous study by Cherrington & Cherrington (1975) where there must be a strong relationship between achieving the target and gaining the reward.

2.2.1 Summary There is a considerable body of literature which indicates that the company budget could be used as a target with the aim of increasing the motivation and performance of the budgetees. The evidence suggests there are limitations to this general rule and that there are some situations where the motivating effect will be greater than others. There are potential problems in reconciling the budget as a target with the use of a budget as a forecast (the aggregate target budgets will exceed the budget forecast). This problem has only rarely been considered in the literature, for example Stedry (1960) and Hofstede (1968).

2.3 Budgets as Forecasts

There is a little contention over the statement that budgets are designed to be forecasts in many instances. The forecasting of future performance and the incorporation of these forecasts in management planning is one of the undisputed rôles for the budget. However, for what may appear as a straightforward aspect of the budget, many issues and problems have arisen.

The first issue concerns the basic problem of obtaining a forecast (in the absence of any organisation or behavioural problems). Otley has examined this issue in two articles. Otley (1985) examined the implications of the budgetee adopting "most likely outcomes" when the underlying distribution is skewed. There are good reasons why the distribution of earnings could be negatively skewed, primarily because companies usually attempt to operate near their capacity constraint, and Otley's study confirmed this in a sample of 41 managers from 2 organisations. If the budgetee adopts as his budget estimate the most likely outcome, i.e. the mode rather than the average or long-run expected outcome (the mean), the budget estimates, when aggregated, will exceed the expected outcome for the organisation. Thus, where there is a negatively skewed distribution, there is good reason to expect that the aggregate budget, and the individual budgets in the long-run, will contain an upward bias for purely technical or statistical reasons. To mitigate this effect to some degree, Otley also tested, and confirmed, the hypothesis that aggregation was likely to reduce the skewness of the underlying distribution. However, Otley & Berry (1979) have demonstrated that one of the results of asymmetric distributions was to magnify distortions to the budget as aggregation takes place. In their example, a manager had nine subordinate managers who each had a 30% probability of meeting their budget, but the probability of the manager meeting his aggregate budget was reduced to 6%.

One of the few studies of how forecasting is conducted in practice was undertaken by Lowe & Shaw. In their study of a medium sized retailing organisation they examined how the sales forecasts were prepared and agreed over two years. Lowe & Shaw (1968) report three main sources of bias that were incorporated into the sales forecasts, viz:

- (a) because the reward system was based on meeting the budget there was a tendency for downward bias, i.e. budgetary slack (see 2.3.1 below);
- (b) an upward bias was caused by the company's new policy whereby a growth element was to be incorporated in all budgets; and
- (c) managers who had previously performed badly incorporated an upward bias in their forecasts whereby their operations would appear satisfactory - at least at the budget stage.

A second paper based on this study (Lowe & Shaw (1970)) examined the more technical forecasting aspects of the process. They found a strong tendency to over-estimate the sales in declining shops and also a less strong tendency to under-estimate the sales in growing shops. This confirmed a more general feature from the literature that the magnitude of changes were frequently under-estimated. Also of considerable interest is their finding that current knowledge about sales changes, based on recent experience, was frequently ignored in the sales forecasts. They conclude that this was the result of strong organisational pressures (to have "acceptable" growth) which outweighed the empirical evidence.

The conclusion from this section is that for both technical and organisational reasons, forecasting will not be a straightforward process and the comment, frequently heard in the interviews of this study, that "our budget is purely a forecast of expected performance" is simplistic and unhelpful.

2.3.1 Budget Slack

Closely linked to the concept of the budget as a forecast is the notion of Budget Slack (BS). A sizeable literature on this subject has developed and some of the more important contributions will be reviewed below.

The concept of BS has probably developed from the more general concept of organisational slack in Cyert & March (1963). Merchant (1985a) further considers this and suggests both beneficial and negative effects from the existence of organisational slack, whereas BS is usually considered to have predominantly negative effects.

BS can be defined as the deliberate biasing of the budget forecast by a subordinate manager with the objective of making the budget less difficult to attain. Or, as "the excess of the amount budgeted in an area over that which is necessary" (Merchant (1985b)). BS is differentiated from forecasting errors by being premeditated, in fact there are many references to the "managing" of BS.

Slack arises primarily as a result of the difference between personal goals and organisational goals (Onsi (1973), Williamson (1964)) but there are many specific reasons why subordinate managers attempt to incorporate BS, including.

- (a) Obtaining a higher level of rewards in situations where rewards are given on the basis of performance which is better than budget.
- (b) Manipulation of long-run profits (and thus rewards in some instances) by creating slack in good years and reconverting this in

bad years (Schiff & Lewin (1970)). This process is often referred to as "managing BS".

- (c) Reducing the pressure to meet the budget being exerted by superior managers. Argyris (1952) was among the first to note the efforts of budget pressure and the tactic that could be employed to ameliorate the situation.
- (d) Reducing uncertainty by 'de-coupling' various parts of the production process. Slack resources are then used when some unexpected event disrupts the production flow and thus slack isolates the effect in one area, allowing other parts of the process to continue normally for a while. Galbraith (1973) describes and gives examples of this process. This procedure may be an organisational policy, in which the term budget slack is probably inappropriate. Alternatively, it could be the covert action of subordinate managers.

Two basic conditions are required for BS to exist within an organisation. First, that personal and organisational goals are not fully congruent. Second, that the subordinate manager has some relevant knowledge (usually concerning effort or potential performance) not available to senior management. Under such conditions, Schiff & Lewin, among many, maintain that BS is unavoidable and will be greater as the degree of authoritarianism in the organisation increases.

A number of studies have reported examples of the creation of BS. In Williamson (1964), the three companies investigated displayed that budgets had previously incorporated BS and in one company, where senior management took action to 'squeeze' BS, there was a 20% fall in costs

whilst output remained constant. In the study by Galbraith (1973) he describes a number of ways in which slack was being built into the budgets of large manufacturing organisations.

Onsi (1973) interviewed 32 middle-managers in 5 large US companies and 80% freely admitted that they bargained for BS. This study also revealed that it was usual for Divisional Controllers at least to know of the existence of BS, but they did not attempt to help Top Management in its efforts to remove slack. Schiff & Lewin (1970) estimated that BS "may account for as much as 20 - 25% of a division's budgeted operating expenses".

This section on BS will conclude with a brief review of four more recent studies. Young (1985) used a laboratory experiment involving 40 MBA students to examine the effects of risk-attitudes and asymmetric information. The study found that risk averse individuals attempted to build in more BS than other types; that this tendency could be reduced by social pressure; but, surprisingly, the hypothesis that increased private information would cause the subordinate manager to build in increased BS could not be confirmed. However, Merchant (1985a) found that the propensity to create BS was strongly related to the superior's ability to detect slack.

Waller (1988) also examined risk attitudes. His study confirmed that both risk-neutral and risk-averse subjects will build in BS if the reward system provides an incentive so to do. However, the study further indicated that when a "truth-inducing pay scheme" was introduced the BS was reduced by 80% for the risk-neutral subjects but by only 23% by the risk-averse subjects. Thus the truth inducing scheme had only a very limited effect on the risk-averse group and could not be relied upon to

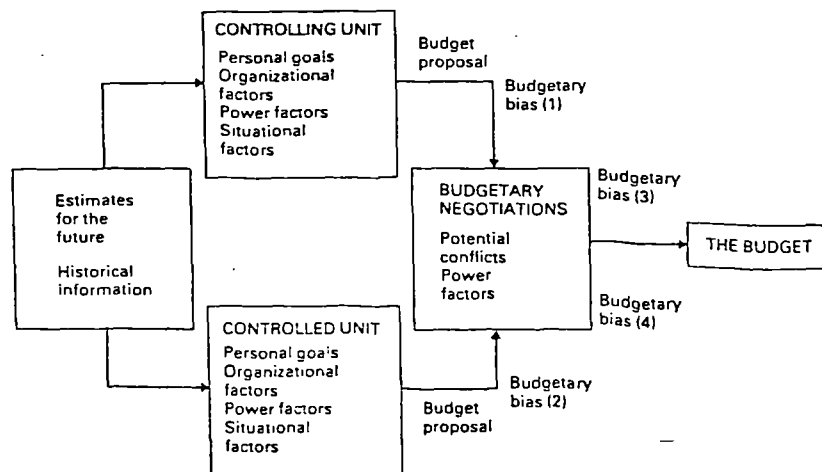
substantially reduced BS.

A number of writers (Argyris (1952), Onsi (1973), Schiff & Lewin (1970)) have suggested that there are good reasons why increased participation in the budget-setting process should result in a reduction in BS. Merchant (1985a), in his study using 170 responses from middle managers in manufacturing companies, found strong support for his hypothesis that participation would lead to a reduced propensity to create BS. Govindarajan (1986) examined this proposition by adopting a contingency approach in which environmental uncertainty was the key situational variable. His hypothesis that increased participation will bring about decreased BS only where high environmental uncertainty exists was confirmed.

Finally, a more elaborate model was constructed by Lukka (1988) who then used it to improve his understanding of what was observed in a particular business organisation. The model dealt with the factors that may determine budgetary biasing at the level of the individual and the organisation. The model of the budgetary process at this organisational level is shown in Figure 2.1.

Figure 2.1

**The Budgetary Process from the Biasing Viewpoint
as per Lukka (1988)**



2.3.2 Summary In most business organisations the budget will have a rôle as a forecast, though this will not necessarily be its sole rôle. However, the technical problems of determining an accurate forecast and the organisational problems, such as budgetary slack, result in this forecasting rôle being complex and problematic.

2.4 The Managerial Use of Budgets

The fundamental point which is made in this section is that the budget cannot be viewed in isolation or solely as a technical device forming part of the accounting system. Some of the traditional writing on budgets, and an increasing amount of the recent literature, stress that the budget is primarily designed as an instrument to help management in its task of controlling the organisation. The budget is viewed in its organisational context. The literature suggests (for example, Hopwood (1972), Otley (1978)) that where meeting the budget is a major objective in itself, the organisation will perform less effectively than an organisation where the budget is viewed in a wider context.

This managerial or organisational view of the budget is apparent in much of the literature. For example, Hofstede (1968) emphasises the managerial rôle of budgets throughout his book. Merchant describes a budgeting system as:

"... a combination of information flows and administrative processes and procedures that is usually an integral part of the short-range planning and control system of an organisation". (Merchant (1981), p.813).

and the budget itself as:

"... the primary financially-oriented organisational control mechanism ...". (Merchant (1984), p.291).

Otley (1980) considers the budget as part of an "organisational control package", the components of which "form a package which can only be evaluated as a whole".

This management and organisational emphasis can be seen in writers who have developed less common rôles for the budget. Parker (1978) considers the budget as a communication device capable of being an important instrument for upward and downward communication within the firm. Covalleski & Dirsmith (1986)

"... [assess] these political theories of organisations which suggest that budgeting serves to establish, distribute and maintain power within organisations".

This is not a new emphasis as Cyert & March (1963) saw budgets as the result of a political bargaining process and that their rôle may be to legitimise decisions, power and control within an organisation. This organisational aspect of the budget will be further developed in Chapter Six.

The final subject to be considered in this section concerns managerial choice of the rôle and use of budgets. As Merchant (1984) expressed this: "Budgeting ... is now generally recognised to be used differently in different organisations". This feature was noted before it could be explained, but it is clear from many writers that management

choose to use their budgets in very different ways. Bruns & Waterhouse (1975) were among the first to examine budgetary control systems specifically in this light and to adopt a contingency approach to explain the differences in company budgeting practices. A more detailed review of Contingency Theory is held over to Chapter Six but at this stage the general feature of this approach is noted, i.e. that in different environmental situations and organisational structures, different budgetary control systems will be adopted. Bruns & Waterhouse found that larger, more diversified organisations, which were generally more decentralised, developed more formal and complex budgeting systems.

Summary. The budget does not exist in isolation from the organisation in which it is found. Rather, the organisation's context will to some extent shape managerial choice of the rôle and use of budgets and there are certain rôles for the budget which only become apparent when seen in the wider organisational setting.

2.5 Budgets as Standards for Performance Evaluations

This is the familiar use of the budget as a means of control through the process of comparing actual performance with budgeted performance, calculating variances, investigating their causes where appropriate and taking any necessary remedial action. All textbooks examine this aspect, usually in considerable detail, and with varying degrees of sophistication. This rôle for the budget has received support from some writers whose interest lies in more general appraisal issues. Thompson and Dalton (1970) examined the quite common "peer comparison" appraisal techniques and demonstrated some of the problems of these "zero-sum" approaches. They advocated "objective-focussed" appraisal

techniques of which budget centred evaluation or "management by exception" are examples.

Meyer, Kay & French (1965) conducted a series of studies on appraisal related issues in the General Electric Company. Among their findings was that appraising more than one aspect at once, using the same means, was likely to cause major problems. This has importance in the budgeting context as there is often some ambiguity about what is being evaluated. In particular, typically, there is evaluation of a department or cost centre and the evaluation of the head of the department or cost centre. There are important differences in the evaluation of these although they may in practice be appraised at the same time, using the same data.

There is also a well-established theme in the literature (e.g. Locke & Bryan (1966) & (1967), Meyer, Kay & French (1965)) which states that specific goals will produce better performance than the more general goal of "do your best". Steers (1976) found that specific goals were strongly positive related to job satisfaction and job involvement. The use of the budget in the performance evaluation process is a clear means of setting clear and specific goals, irrespective of whether the budget is seen as a difficult target at which to aim.

The academic literature (as opposed to text books) has spent little time on the basic aspect of how the budget can be used as a standard for performance evaluation. There has been some interest in the advantages or otherwise of different variance calculations; one of the more controversial issues being that of *ex ante* versus *ex post* analysis advanced by Demski (1967). The *ex post* concept was criticised by Amey (1973), most strongly because it did not exist as a choice facing the

decision maker and thus has no control significance.

However, there has been a long-standing interest in the consequences of using the budget for performance evaluation. As far back as Argyris (1952) there was recognition that the manner in which performance evaluation, in relation to the budget, was conducted could have serious consequences for the organisation as a whole. This has resulted in considerable interest in the effects of pressure to meet the budget and a substantial literature.

2.5.1 Budget and Pressure

Argyris (1952), in a fascinating study by interviews and observation, described how pressure to meet the budget resulted in a range of dysfunctional behaviour. This included: concentration on sub-units rather than the organisation as a whole, much time and effort expended on proving that someone else was responsible for a budget variance, the creation of groups and group loyalties, and implicitly in the building of budget slack.

Hofstede (1968) describes how high reliance on accounting performance measures leads to high feelings of pressure and nervousness. Onsi (1973) found that when the budget was being used for performance evaluation in such a way that pressure to meet the budget was experienced by the budgetee, then the creation of budget slack, with dysfunctional consequences, would result. Similarly, Merchant (1985a) found that when there was pressure on the manager because meeting the budget was an important factor in resource allocation, the motivation to build in slack increased.

Hayes (1977) made a more general point when he wrote,

"The research results ... indicate that the traditional managerial accounting tools were relatively poor explanators of effectiveness".

The use of the budget as a standard for performance evaluation is thus fraught with problems as it is effectiveness which ideally should be measured and encouraged. A similar point is made in Hopwood (1972), pp. 157 - 158. This general problem can be exacerbated by the manner in which the budget is used, as is demonstrated in the following.

In a paper in 1972, Hopwood considered this issue and others have conducted further research on the matter. Hopwood's empirical test took place in a large US manufacturing company using questionnaires and interviews. Four styles of evaluation were defined, namely:

- i. Budget Constrained style (BC) : meeting the budget, but not concern with costs ranked in the top three.
- ii. Budget-Profit style (BP) : both meeting the budget and concern with costs were ranked in the top three. (This style was amalgamated with BC above for some purposes).
- iii. Profit-Conscious style (PC) : concern with cost, but not meeting the budget ranked in the top three.
- iv. Non-Accounting style (NA) : neither meeting the budget nor concern with costs were ranked in the top three.

The study concluded that managers who feel they are being evaluated under a BC style reported:

- (a) significantly higher levels of job-related tension than in the other two groups;
- (b) that relations with their superiors deteriorated;
- (c) less favourable relations with peers;
- (d) that they were more likely to engage in manipulative behaviour.

Perhaps surprisingly, the style of evaluation did not seem to affect whether the budget was met or not. Hopwood also concluded that it is not the use of the budget as a standard of performance evaluation per se, but the manner in which the evaluation is conducted and then used which is important. Only when meeting the budget becomes an end in itself, irrespective of any dysfunctional consequences, does it become the source of considerable pressure and the consequences noted above occur. The study was unable to directly test the impact of these styles of evaluation on overall organisational performance, but it was Hopwood's conclusion "that a PC style is likely to result in a higher level of efficiency than a BC style".

These important findings about the use of the budget in performance evaluation have not remained unchallenged. Otley (1978) replicated part of Hopwood's study using 57 managers from a UK manufacturing company. His findings indicated that an evaluation style which involved particular stress on meeting the budget (BC) resulted in:

- (a) a decrease in job ambiguity and better performance;
- (b) no significant increase in job-related tension;
- (c) budgets being met more frequently;
- (d) evidence of manipulation and the incorporation of budget slack;

(e) better general financial performance.

These results, with the exception of (d), were contrary to those presented by Hopwood. Otley (1977 & 1978) suggests some reasons for this, including : differences in responsibilities in units (profit centres v. cost centres), size, and differences in the operating environment. These differences may also reflect differences between US and UK and this possibility is discussed later in the thesis.

Hirst (1981) took up the basic ideas of Hopwood and suggested that accounting performance measures will be perceived as being incomplete and that where this occurs, dysfunctional behaviour of various types will occur. Hirst particularly stressed the rôles of task uncertainty and reliance on accounting performance measures (RAPM). He hypothesised that internal measures of performance will be perceived as more complete when task uncertainty is low, rather than when it is high. He examined the difference combinations of degree of RAPM and degree of uncertainty and made a number of propositions which include many where considerable dysfunctional consequences follow.

In Hirst (1983) this model was used to investigate the differences between the results of Hopwood (1972) and Otley (1978). He concluded that RAPM is associated with job-related tension but that this association is dependent on task uncertainty, e.g. where there was high task uncertainty, job-related tension increased as RAPM increased. Hirst concludes that the use of intervening variables gives a possible reconciliation of the differences between Hopwood and Otley.

Brownell (1982) is another attempt to examine the differences between Hopwood and Otley. This study examined the rôle of budget part-

icipation as a moderating variable between evaluatory style and performance, although in this study job satisfaction was used as a surrogate for performance. Brownell found support for his hypothesis that participation is a moderating variable and he states:

"[there is] strongest support for Hopwood's contention that a Budget Constrained style can directly result in adverse consequences." p.23.

Brownell suggests that participation works as a moderating variable because it ensures that only organisationally functional information is included in the budget, which then becomes a more complete measure of performance and, thus, if a BC style is adopted it will result in organisationally better performance being encouraged.

Brownell & Hirst followed up the studies outlined above and an earlier study by Kennis. Kennis (1979) had tested a range of budget-related variables, and one conclusion in particular that, where budget goals were "too tight" they would result in increasing job-related tension. Brownell & Hirst (1986) tested two hypotheses; first, the relation between performance and the three variables: budget participation, budget emphasis (similar to evaluatory style) and task uncertainty; and, second, the relationship between job-related tension and the same variables. Unfortunately, the hypothesised relationship for performance was not supported, and thus this did not confirm the results of Brownell (1982). For job-related tension it was found that compatible combinations of participation and budget emphasis (high : high and low : low) are more effective in reducing job-related tension in low as opposed to high task uncertainty situations.

2.5.2 *Summary.* The large number of studies indicate that the style of budget used as a standard for performance evaluation is critical to the success of the evaluation. When the budget is used in an inappropriate manner, there is a strong likelihood that dysfunctional consequences will result. The more recent studies have attempted to look more deeply at this relationship and examine the rôle of other budget-related characteristics. This examination is not complete, but a contingency approach appears to be the most promising way ahead in which the interrelationships between various variables are examined and some conclusions drawn to enable good design of performance evaluation systems.

2.6 Participation in Budget-Setting

This subject has already been mentioned in passing, particularly with reference to budget slack and budget pressure. There is a large literature which merits a separate review and discussion. Within this literature on participation different issues have been raised and approaches taken, and this will be taken into account in the framework adopted for the review as shown below:

1. Studies which report general results.
2. Generally accepted conclusions.
3. Studies which use contingent or intervening variables.
4. Other issues.

2.6.1 Studies which report general results

Among the first to comment on this matter was Argyris (1952). After

describing many of the dysfunctional consequences of authoritarian budgeting systems which produced pressure and stress on employees, he strongly advocated a change to a more participative style as the remedy to cure the undesirable behaviour he had observed. Other writers endorsed this position that participation would bring benefits to the organisation, including improved performance.

Milani (1975) found that increased participation was related to increased performance; the association was not strong being, significant at the 10% level. Searfoss (1976), in a large study of 342 foremen in five industrial companies, found that increased perceived participation was related to increased motivation to achieve the budget and concluded:

"[there was] the possibility of increasing effort expended by increasing the perception of participation". p.384.

Searfoss also observed that the effects of participation will filter down through an organisation so those managers who are allowed to participate are more likely to allow their subordinates to participate in decision-making.

Kennis (1979), in a study which examined many different variables, found that participation produced an increase in budget performance, but did not find a significant overall relationship with job performance. In a study using professional engineers in their usual work situation, Ivancevich (1979) found that those managers who were deprived of the participation which they desired performed significantly worse than other non-deprived managers.

There are also research reports which have concluded that participation is not, in general, likely to improve performance. Stedry (1960) concluded from his laboratory experiment on students that imposed goals (budgets) produced better results than goals formed in other ways. In a study of the attitudes to and success of a "management by objectives" scheme, Carol & Tosi (1970) concluded that participation in the setting of goals (budgets) did not seem important in the perceived success of the scheme. Neither did participation result in better relations with superiors or better goal achievement. These were unusually negative results, as the study found virtually no positive benefits from participation.

Foran & DeCoster (1974) used the concept of "cognitive dissonance" as a means of explaining the effects of participation. Cognitive dissonance occurs when a subject holds two cognitions which are psychologically inconsistent, i.e. when there is confusion as to which beliefs and actions result from a particular situation. It is usually supposed that individuals will avoid this situation if possible. Foran & DeCoster hypothesised that authoritarian and participative styles would produce significantly different levels of cognitive dissonance. However, their tests did not support this hypothesis and little value for participation was evidenced. Ivancevich (1976) also failed to find empirical support for his hypothesis that the participative group in his study would produce a better performance than an authoritarian group.

Thus there is clearly a difference in the literature between those finding evidence for a general benefit from participation and those unable to find such evidence. This difficulty will be further examined in Section 2.6.3.

2.6.2 Generally Accepted Conclusions

Before examining further the problems raised by the contradictory results regarding the effects of participation on performance, there are some issues where the literature has a more consistent voice.

2.6.2a Job Satisfaction. In 1964, having reviewed the available literature, Vroom (1964) stated:

"There is considerable evidence that the satisfaction of subordinates is positively associated with the degree to which they are permitted an opportunity to participate in making decisions". p.115

Further evidence, subsequently, has supported Vroom's conclusion that increased participation will result in increased job satisfaction. A study by Steers (1976) found a strong positive relationship between participation and job satisfaction. This sample was unusual in being female without higher education, whereas most other samples were of college students or managers. Chenhall & Brownell (1988) also found support for this relationship, as did Swieringa & Moncur (1972) in their sample of 26 bank branch managers. Ivancevich (1976) is one of the very few tests not to support this conclusion (and there were problems in this test concerning the transition to a participative style which may explain the lack of positive results).

2.6.2b Reduced Job Tension. There is little evidence to the contrary and much to support the proposition that participation will reduce job tension. The basis for the comments by Argyris (1952) is that participation will reduce the tension caused by the authoritarian system he had

observed. Brownell & Hirst (1986) found in their three-way test involving budget evaluation, task uncertainty and budget participation, that participation significantly reduced job-related tension.

The above discussion assumes that job tension is undesirable for some reason and thus it would be beneficial to reduce it. However, the results of Swieringa & Moncur (1972) suggest that this may not be so. The bank managers in their sample who experienced increased participation also experienced considerably greater job-tension. This may have been as a result of their "boundary position" between head office and the branch or it may have been an inevitable consequence of participation. This was considered acceptable by the managers because : (a) participation brings other benefits which outweigh increased tension, and (b) the increased job tension is still within tolerable limits. This study is an exception to the general conclusion, given above, and may reflect the unusual position of branch bank managers in the study.

2.6.2c More favourable job attitudes. There are a number of different attitudes which are encompassed in this heading. French, Kay & Meyer (1966) found that participation improved the attitude of employees to the appraisal system in which they were allowed to help set goals. Hofstede (1968) found participation was an important feature in improving attitudes towards the budget system (see Figure 2.2. in Section 2.6.3). Milani (1975) shows that participation was positively related to attitudes towards the firm as a whole.

In studies by Mia (1987) and Govindarajan (1986) a composite variable for managerial attitudes was used comprising attitudes towards: superiors, the budget, the firm, undesirable activity, etc. In both

these studies there was a positive relationship between participation and improvement in attitudes.

Thus it is apparent from the literature that while the relationship between participation and performance is problematic, the relationships with job satisfaction, job tension and job attitudes are far less equivocal.

2.6.3 Studies which use contingent or intervening variable

It was clear in Section 2.6.1 that there was no consensus on the effects of participation on performance. The studies reviewed there examined general or universal propositions regarding the participation/performance relationship. Hofstede (1968) put this universal relationship in this diagram of the "traditional view of the effect of participation on standard-setting" shown in Figure 2.2 below.

Figure 2.2

The Universal Proposition Regarding Participation and Performance

as per Hofstede (1968) p.178

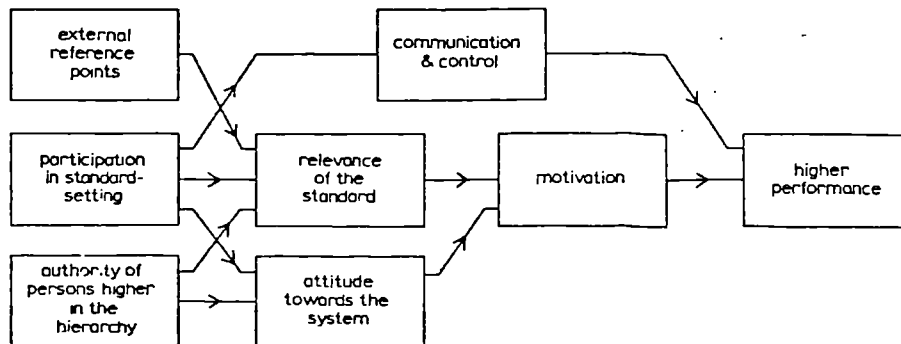


As a result of his study, Hofstede proposed a more complex relationship which he describes as "an improved model". This is a move away from the

universal to a more contingent view in which there are many variables to be considered and where an increase in participation may or may not lead to better performance. The Hofstede model is shown in Figure 2.3.

Figure 2.3

An Improved Model of the Effect of Participation on Standard
Setting, as per Hofstede (1968), p.178



This section contains a review of some of the variables which have been examined as possible contingent or intervening variables to account for the relationship between participation and performance. It is suggested that the different results described in Section 2.6.1 arose because these contingent variables were ignored. They were in fact in operation and in some of the tests they were unintentionally compatible, and thus a positive relationship between participation and performance was found. Whereas, in others they were incompatible and thus no relationship was found. These variables will now be examined.

2.6.3a Personality Types. This was the first variable to be noticed and tested. Vroom (1959) found that participation produced improved performance when those involved were "low authoritarian persons with high independence needs". These two variables were high correlated and thus both characteristics were frequently found in the same people. He also found that there was no improvement in performance for persons with the opposite characteristics. Searfoss & Monczha (1973) produced a very similar result.

Seiler & Bartlett (1982) attempted to look at this question from a different perspective and tested whether it was possible to predict budget system characteristics from personality variables. Their tests concluded that authoritarian inflexible persons with high independence needs would be found in non-participative budgetary systems and vice versa. It is worthy of note here that Vroom found participation and high independence needs were compatible whereas Seiler & Bartlett found participation and low independence needs produced better performance. There appears to be no obvious reconciliation of this contradiction. On the basis of their results, Seiler & Bartlett recommend that all changes in budget systems should be evolutionary as the current state is likely to reflect the personality characteristics of the current staff and such characteristics cannot be changed rapidly.

Two studies are reviewed that have examined the personality variable "locus of control". This variable "measures the extent to which individuals exercise control over the reinforcements which occur relative to behaviour" (Licata *et al* (1986), p.112). The variable classifies individuals into:

"Internals", who feel their rewards and punishments are determined by their own actions, and

"Externals", who feel that the force which yields rewards or punishment is beyond their control.

Brownell (1981) summarised the preceding literature as in Figure 2.4.

Figure 2.4

Locus of Control and Participation per Brownell (1981)

		LOCUS OF CONTROL	
		Internal	External
SOURCE OF CONTROL	High (Participative)	CONGRUENCE <i>High Performance</i>	INCONGRUENCE <i>Low Performance</i>
	Low (Non-Participative)	INCONGRUENCE <i>Low Performance</i>	CONGRUENCE <i>High Performance</i>

Brownell examined the hypothesis that performance would be higher when locus of control and participation were congruent. The laboratory-based test was carried out on samples of students and managers and in both cases the predicted relationship was found.

Licata et al (1986) examined the effects of the locus of control variable in the superior manager, whereas Brownell and others had looked at the effects in subordinate managers. The hypothesis that internals would allow a greater degree of participation than externals was tested by a laboratory experiment. The hypothesis was supported by the test at the 1% level of significance and forms an interesting counterpart to the Brownell (1981) results.

The results of these tests suggest that for personality types, particularly in respect of locus of control and degree of authoritarianism, there are considerable differences in the relationship with participation. Participation has been associated with increased performance in certain predictable personality types.

2.6.3b. Organisational attitudes. This title includes a range of attitudes also described as "cohesiveness", "morale" or "attitudes towards the firm". The hypothesis that has been examined is that unless these attitudes are positive, then participation will not have a beneficial effect on performance, and it may be detrimental. Becker & Green (1962) examined this issue in a theoretical manner and proposed that only where the attitudes within the organisation (to other members and to the objectives) were positive, would participation produce benefits in performance. Mia (1988) tested a similar hypothesis, i.e. "Managers whose budget participation is congruent with their attitude will demonstrate improved performance, while managers whose budget participation is incongruent with their attitude will demonstrate hampered performance". This hypothesis was tested on a sample of 83 managers from a large manufacturing company and could not be rejected at 2% significance level.

Thus the evidence suggests that organisational attitudes are important features in the relationship between participation and improved performance. Without positive attitudes, performance will not be improved by participation. However, there is a possible problem of circularity here. In section 2.6.2c, it was seen that participation will result in improved organisational attitudes, and in this section

participation may be dependent upon good organisational attitudes. This circularity has not been noted in the literature and thus its importance has not been evaluated. It is the opinion of the researcher that organisational attitudes are probably not important causal variables, but are better considered as constraints on participation producing improved performance. In an environment which is conducive to effective participation there will be good organisational attitudes and such attitudes will also be strengthened by participation.

2.6.3c Uncertainty. Different forms of uncertainty have been examined. Galbraith (1973) wrote:

"It is hypothesised that in order to be effective, organisations will utilize these forms [i.e. participative lateral relations] in proportion to the amount of task uncertainty".

p.47

He found evidence for this hypothesis in a number of large organisations.

Brownell & Hirst (1986) tested the interaction of three variables, one of which was task uncertainty, with participation and performance. Their evidence did not support the hypothesis made by Galbraith above, although they had expected to be able to confirm it.

Govindarajan (1986) proposed a formal contingency approach to the explanation of participation and tested environmental uncertainty as one of two key contingent variables. His straightforward hypothesis that "the greater the environmental uncertainty, the greater the positive impact of participation in the budgetary process on managerial performance" was tested using a sample of 77 managers from a large business

organisation. The results gave "clear and strong support" for this hypothesis.

The general impression from the papers considered is that uncertainty, either task or environmental, is a potential intervening or contingent variable which will help to explain the participation performance relationship.

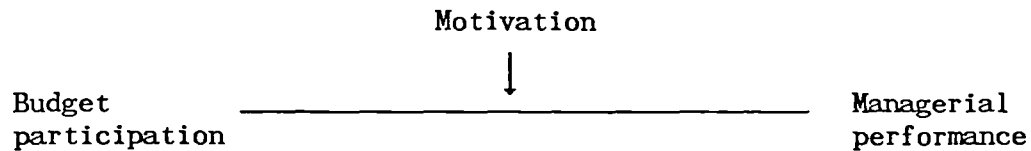
2.6.3d Motivation. Two studies involving Peter Brownell attempted to show that the primary cause of the link between participation and improved performance was by means of improved motivation. This view had been advocated by many from Argyris (1952) and Becker & Green (1962) onwards. Both of the Brownell studies (Brownell (1983) and Brownell & McInnes (1986)) adopted an expectancy theory approach to the measurement of motivation and tested the hypothesis using questionnaires on middle-level managers. These studies failed to find support for the intervening effect of motivation and Brownell & McInnes found one of the key relationships to be opposite to that predicted by the hypothesis. It is interesting to note that a strong positive relationship between participation and performance was found, but "only a small proportion of this was accounted for by the path through motivation" (Brownell & McInnes (1986), p.597).

Mia (1988) has also examined this proposition. His hypothesis was that where participation and motivation are congruent then improved managerial performance will result. Mia examined the potential of motivation as a construct *moderating* the relationship between budget participation and performance. Here the term moderating is used in the sense that motivation is related to neither participation nor perform-

ance but to the relationship between these latter variables as shown in the figure 2.5 below. (Mia (1988), p.467).

Figure 2.5

Moderating Potential of Motivation as per Mia 1988



Mia found that the results of his study strongly supported the moderating effect of motivation and that congruence between participation and motivation was strongly associated with improved performance.

Thus, whereas the interaction between motivation and the participation-performance relationship has been discussed for many years, it appears to be more complex than originally thought. Some earlier tests failed to confirm simpler hypotheses but a more complex hypothesis by Mia was supported.

2.6.3e Rôle ambiguity. Chenhall & Brownell (1988) stated that simple relationships between participation and performance are not supported by the literature and so they continued the exploration for intervening variables which explain the relationship. Their study examined rôle ambiguity which occurs when the expectations for managers are such that they cannot clearly be translated into behaviour or expected performance levels. The results of Chenhall & Brownell (1988) do not support a positive relationship between participation and performance directly. However, their hypothesis that rôle ambiguity is an intervening variable

which explain the relationship, is strongly supported.

2.6.3f Information Asymmetry is the final variable to be considered. Young (1985), in a laboratory experiment using 40 MBA students, investigated the hypothesis that information asymmetry, particularly in favour of the subordinate manager, would result in dysfunctional behaviour and poorer performance. This hypothesis could not be supported in general because the subjects engaged in very diverse behaviour when they had private information. Some of this behaviour was as predicted, but much was not.

2.6.4 Other Comments on Participation

Two other articles have made important contributions to this literature. First, Daroca (1984) examined the specific group effects in a participative budget setting. Many of the other studies have included these effects implicitly because they have questioned managers about their practices which include some group loyalties and other group effects. Daroca conducted a laboratory experiment to examine these effects specifically. He found that participation in a group setting produced some interesting results, including:

- (a) The group may encourage the sharing of information and thus increasing the total information available. This is one of the advantages that is frequently put forward in support of participation.
- (b) Certain types of information may be inhibited by the group process, particularly information which is contrary to the initial or generally held position.

- (c) A budget developed by a group may not be internalised by the individuals as the result is seen as "only an artifice of the group". This is contrary to the typical advantages of participation advocated in textbooks.

A second important paper is that of Parker (1979) where he examined the institutional aspects of participation and surveyed the prospects for increased participation. The differences between countries and the effects of institutions, such as the legal system and the trade unions, put the results outlined above in a wider perspective.

2.7 UK Empirical Evidence on the Rôle of Company Budgets

The actual rôle played by the budget in UK companies has not figured prominently in the literature. Such evidence as there is comes from three sources : literature which directly addresses this issue; published case-studies, and UK textbooks.

2.7.1 Literature which directly examines the rôle of the budget.

Probably the earliest work on this that still has any relevance today is Perrin (1958). This PhD thesis examined budgetary planning and control in 30 UK companies. 22 of these companies used operating budgets. Perrin asked questions directly about the objectives and purposes of the budget and the overwhelming response gave forecasting, planning and cost control as the primary objectives. There was no mention of budgets being used as targets or any other directly motivational purpose. All but one of the companies stated that their budgets were expectations, i.e. forecasts of what they expected would occur.

Dew & Gee (1972) investigated management control in UK companies and the budget was an important aspect of this in many of them. In a study quoted by Dew & Gee, 45% of the managers interviewed made no use of the budget and a further 29% made only limited use of it for management control purposes. Dew & Gee's own study found a greater use being made of the budget and the overall picture is of a budget designed as a forecast and being used in planning and control. Again, there is no discussion of motivational purposes for the budget.

The final item considered is Murray (1970) in which the management controls of four business organisations from Eire were examined. The budget is only a part of this investigation but there is no evidence of any motivational target in the rôles which the budget plays. The emphasis is again on planning and control, and efficiency gains are sought through better planning and control rather than by direct motivation to higher effort levels.

2.7.2 Case-Studies. Where case-studies describe the budgetary system in a particular company, they give useful insight from which it is quite often possible to conclude what rôle the budget has in that company. As an example, a very useful series of case-studies has been edited by Sizer & Coulthurst (1985). In volume 1, seven of the case-studies describe the budgetary process in sufficient detail to enable some conclusions as to the budget rôle to be drawn. Six of the companies have a budget which is a forecast of expected performance and only one has a direct motivational target.

2.7.3 UK text-books. Although text-books do not directly describe practice, there is a high probability that text-books and practice are closely related. Text-book writers pay some attention to "the real world" whereas practitioners are influenced by the texts from which they learned. If this is so, then an examination of the UK text-books popularly used to teach practicing management accountants will give an indication of the rôle of the company budget. Many of the texts make virtually no mention of anything other than forecasting, planning and control (e.g. Baggott (1973), Batty (1978a), Edey (1959) and Wald (1984)). Others, such as Arnold & Hope (1983) and Drury (1985) give much more emphasis to the traditional forecasting and control whilst giving some time to the motivational aspects.

2.7.4 Summary. From this brief review of the empirical literature on the use of the budget in UK companies, it appears that the budget is primarily seen as a forecast of likely actual performance which can be used for planning and control purposes.

NOTES TO CHAPTER TWO

1. The eight texts reviewed were:

Arnold & Hope (1983), Drury (1985), Emmanuel & Otley (1985), Heitger & Matulich (1982), Horngren (1982), Killough & Leininger (1984), Moriarty & Allen (1984), and Shillinglaw (1982).

CHAPTER THREE
METHODOLOGY AND STATISTICAL TESTS

3.1 THE SAMPLE

The central objective of this study was to investigate the perceptions of the rôle of the budget and attitudes towards certain budget related issues within a sample of U.K. companies. If it could be assumed that uniform perceptions and attitudes towards the budget prevail within each company, it would have been feasible to send a postal questionnaire to a large number of companies. This would have had the advantage of a large sample size enabling parametric statistical techniques to be used.

However, although an official company view may exist, it is doubtful whether this would be held by all members of the organisation. Indeed, a crucial issue to be explored in this study is the extent to which different budget users hold similar perceptions and attitudes. Moreover, the restriction on the companies participating to a relatively small number, allowed individual characteristics of companies to be investigated by personal interviews with company personnel.

Consequently this study adopts the following strategy.

(a) A questionnaire on the rôle of budgets and related issues was distributed to employees within a small number of companies, the selection of which is discussed in section 3.1.2.

- (b) Each company participating was visited and a senior financial official was interviewed. More details of this are given in section 3.3. The chief aim of the interview was to obtain information about the company's structure, organisation and environment which would enable the results of the questionnaire to be interpreted at a later stage.

3.1.1 The Three User Groups

It would have been possible to select a random sample of company employees to complete the questionnaire. However, another possibility was adopted as having considerable advantages over a random sample. The budget is used by various members of a company, many of whom come from recognisable, definable groupings. These are termed user-groups within this study. Three user-groups were selected and from each user-group a sample, the selection of which is discussed below, was asked to complete the questionnaire. The three user-groups are stated and described below. The abbreviation given after each user-group is used frequently in the remainder of the thesis.

- (a) Accountants (AOCT) This group is distinct and there were no problems in definition or selection. The group is not wholly comprised of qualified accountants, but all the members are above the level of accounts clerks (many are part-qualified). In all the companies the members of this user-group are part of the accounting function and have their sole or primary responsibility within this function.
- (b) Senior Non-Financial Managers (SNFM). This user-group came from a range of functions within the company. Typical members of the

company who were included in this user-group were : managing director/general manager; heads of production, maintenance, research and development and occasionally marketing. The finance director was not part of the user-group.

- (c) First Line Managers (FLM). This group was the most difficult to define and the definition used for the purposes of this study was "the lowest level of management where there is direct involvement with budget data in the course of normal work". Typically this user-group comprised heads of departments or cost-centres.

It was the *a priori* belief of the researcher that members of these user-groups, which occupy very different positions and have different functions within the organisation, may well have different perceptions and attitudes towards the budget. Thus, in sampling from each of the user-groups, another dimension could be added to the study and this is developed in Chapter 5 where differences between the user-groups are investigated. There is further discussion of the three user-groups in section 5.1.

It was decided to select six individuals from each user-group (the selection process is described in section 3.3.1). Thus in each company eighteen questionnaires were issued. This particular sample size resulted from a compromise between various conflicting factors, including the following.

- (a) To gain admission to the required number of companies, the total amount of time expended by employees participating in the study must not seem unreasonable. It was assumed that the greater the number of individuals required, the lower would be the probability of a company agreeing to participate.

- (b) The sample size must be above a certain minimum size to allow the statistical tests to operate at the company level.
- (c) There must be some allowance for questionnaires either not being returned or being unusable. The Kruskal-Wallis test, described in section 3.4.2b, has special tables for three small samples. Samples of four can be validly used with this test.

The compromise decided upon was six per user-group. Another advantage of this size became apparent when the questionnaire was administered as there were only six accountants in some of the smaller companies. Had the sample sizes been greater, this could only have been accomplished by using accounts clerks. It was important not to do this as the accountants user-group all have some professional training and this may be influential in creating attitudes to the budget and budget-related issues. In one company there were only five accountants and so the sample size was altered accordingly.

3.1.2 The Companies in the Study

The original intention was to obtain fifteen companies who would participate in the study. It was believed that such a number would be obtainable and would be sufficiently large to enable some statistical tests to be used and conclusions drawn. Whilst a larger sample would have had some advantages, these were outweighed by the difficulty in gaining entry to companies and the time and cost of further visits. The companies in the sample had to meet the following criteria which were set in order to impose a degree of comparability necessary for later analysis.

- (a) Turnover greater than £10m.
- (b) More than 500 employees.
- (c) Engaged primarily in manufacturing or processing.

These criteria apply to the participating unit, not to the company as a whole, where these were different.

The following procedures were used to obtain companies who would participate in the study.

- (a) The Chartered Institute of Management Accountants, who had financially sponsored the study, asked its local branch to arrange introductions where possible. This was invaluable. A number of companies participated as a result of this; a pilot study in one company was arranged and helpful comments were received from a small group of the local branch committee.
- (b) Personal contacts were used and introductions were made to a small number of companies by this means.
- (c) Contacts with two local firms of Chartered Accountants were made and they provided a few introductions with companies which they thought would be willing to consider participating in this study.
- (d) Finally, all the companies who met the above criteria that were listed in the trade directory for the six counties around Bristol were contacted by letter (unless they had been contacted by other means). The letter explained the purpose of the study and the requirements for a participating company.

Ninety companies were contacted by one of the above methods from which fifteen agreed to participate. The great majority of those participating came through personal links of some kind. Two of these were unable to produce the required number of completed questionnaires and thus the final sample of companies was thirteen, i.e. 14% of those approached. In both companies where there was an unsatisfactory return of the questionnaires, the cause lay in the lack of influence that accountants had in the operational areas of the company.

One of the intentions in any study of company practices is to be able to draw conclusions or make comments about the whole population of similar companies. In this study there is a sample of thirteen medium or large sized UK manufacturing companies but before conclusions or comments can be made, the sample must be examined for any observable bias. There are many aspects which can produce bias and some of the most common are discussed below.

- (a) Industry. The companies come from a wide range of industries as can be seen from an examination of Appendix 2, where the major characteristics of each company are presented. The only unusual feature is that four companies have some connection with the aerospace industry.
- (b) Markets. There is considerable diversity between UK and overseas markets and between government and private customers.
- (c) Organisation Structure. All but three of the companies visited were subsidiaries but none had overseas parent companies.

- (d) Reasons for participating in the study. All the companies were asked why they had agreed to participate. A wide-range of replies was given ranging from one finance director who stated "our budgeting is poor and we might learn something" to the chief accountant of another company who commented "we're really quite proud of our budgeting".
- (e) Previous links with researchers. None of the companies in this sample had participated in any research study involving the management control function in the preceding few years. There was no history of connection with researchers in the areas of the company that were involved in this study.

It has been concluded by the researcher that there is no observable bias in the companies participating in the study. The only known feature which limits the drawing of conclusions which have general applicability to medium and large sized UK companies is the sample size.

3.2 THE QUESTIONNAIRE

3.2.1 The Form of the Questionnaire

It was decided to draw up a questionnaire specifically for this study. There are existing questionnaires for certain aspects of the study, e.g. budget pressure and participation in the budget-setting process. However, these are often quite lengthy and they would have increased the time taken to complete the questionnaire beyond the point which the researcher believed would have been acceptable to the companies who showed an interest in participating. In the design of the questionnaire there were similar conflicting features to those discussed

in relation to the sample size. There was a desire for as much data as possible but there was the constraint of what would be deemed acceptable by the company. It was decided to construct a simple questionnaire which covered the main issues of the study and which could be completed within half an hour.

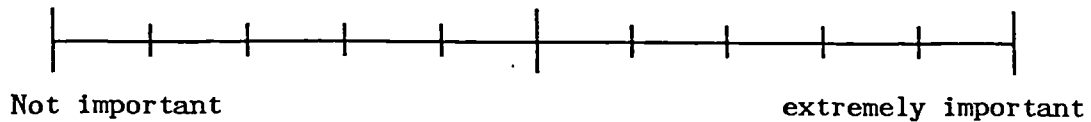
The questionnaire, which may be seen in full in Appendix 1, contained a few opening questions about the individual, length of time in the job and the company, job title, etc., and seven main sections as described below.

- A - The importance of certain objectives to the company.
- B - The influence of different groups in setting the objectives.
- C - The importance of various purposes for the budget.
- D - The influence of different groups in drawing up the budget.
- E - The relationship between the budget and various incentives.
- F - Personal importance attached to the budget.
- G - Pressure to meet the budget.

The main questions in sections B, C and D were asked in two forms: first what the individual thought was the actual state of affairs in their company and, second, what they thought the position ought to be. This allowed some interesting analysis later of the difference between the two sets of answers.

The main questions in sections A - D were answered on a Likert-type scale. For example, in section C, question C1 asked how important various budget purposes were and the answers were given on a scale as

shown below.



This form of answer was preferred to a ranking of the same list of purposes as it allows for additional information to be indicated. For example, certain items may be given similar but not identical importance, and this 'bunching' effect is lost in a simple ranking of the list.

The majority of the other answers require either a yes/no answer or one possibility among a number to be selected.

3.3.2. The Administration of the Questionnaire

The questionnaires were not sent to individuals within the company until the company had been visited and various aspects of the questionnaire had been checked with company procedure, structure and terminology. In one case the questionnaire had to be amended to take account of a particular organisation structure. The questionnaires were delivered to the selected individuals by internal company means. A letter from the company usually accompanied the questionnaire, giving their full support for the individual's participation, or the equivalent message was communicated personally. There was a covering letter from the researcher thanking the individual in advance for their help and explaining the purpose of the questionnaire.

The completed questionnaire was returned directly to the researcher using the stamped addressed envelope provided. The respondent was

assured of confidentiality and their name did not appear on the questionnaire. The letter with the questionnaire stated that information would be given to the company in aggregate form only and in such a manner that no individual's response could be identified.

The senior financial official of the company kept records of the questionnaire numbers and took action to follow up those individuals who did not return the questionnaires. The individuals had not agreed to participate before they were selected (that was done solely on their suitability for the sample) and thus it was expected that some chasing-up would be required and that there would be some questionnaires that would not be returned.

There were two companies where this procedure was not fully followed. In one, the questionnaires were filled in by the individuals at the time of the company visit. These were then collected directly by the researcher and not returned by post. In another, the senior financial official decided to organise the whole procedure himself before the researcher arrived and thus those questionnaires did not come directly to the researcher. This could have resulted in bias in the responses because anonymity was not guaranteed. There is no evidence of this and the senior financial official had not examined the completed questionnaires before the visit of the researcher.

The responses on the questionnaires were transferred to a coding sheet prior to entry into a computer file. The Likert-type answers were translated into an integer score between 0 and 20 while the yes/no type answers were coded 0 or 1. The two-stage process between questionnaire and computer file was checked fully at each stage. An edit programme was run on each company file on the computer which included range checks

and other simple verification procedures.

The response rate of the thirteen companies in the study was as follows:

<u>Number of Questionnaires Returned & Valid</u>	<u>Number of Companies</u>
18	1
17	5
16	4
15	1
14	2
	<hr/>
	13
	<hr/>

When the basic results were available for each company and the combined sample, a version of the results was sent to each company. This was a copy of the questionnaire with the mean score for each user-group marked for each question. Significant results from the Kruskal-Wallis test and the Wilcoxon matched pairs test were also indicated. The official in each company who received these results was invited to comment upon this; however, no comments were received.

3.3 COMPANY VISIT AND INTERVIEW

As has already been mentioned, each company was visited before the questionnaires were issued. The major part of the visit was a meeting with a senior financial official. It was usually through this individual that the participation of the company had been arranged. This official was either the finance director or the chief accountant of the company. In some companies other officials were also met, either in formal meetings or at lunch. Discussions with the senior financial official lasted for approximately two hours.

There were two main purposes for this interview. The first was to ensure comparability in the user-group samples. The second was to gain information about the company which would be used later to interpret the results from the study.

3.3.1 Selection of the Sample

To enable comparisons to be made between companies it was necessary to ensure as much comparability between the user-group samples as was practical. The definitions of each user-group were explained and discussed with the senior financial official in each company. In many cases individuals were chosen by the researcher in consultation with the company official during this meeting, often with the aid of organisation charts or similar information. In some companies only categories of employees were selected and the choice of individuals could only be made by a senior manager responsible for that area. In the instance of the company in which the whole process was completed before the researcher arrived, the sample was reviewed and found to be compatible with the criteria used in other companies. The researcher did not have full control of the selection procedure as some individuals were suggested or selected by company officials. However, the criteria laid down by the researcher were followed and no bias was detected.

Due to differences in organisation structure and company size, it was not possible to achieve identical samples from the user-groups from each company. There were few problems in selecting the accountant group as this user-group was the most tightly defined. In some companies there was no choice to be made as there were only five or six individuals who met the definition. For the SNFM there were only marginally more

problems and in all cases there were at least six individuals who were clearly seen as part of the senior management of the company.

The greatest problems arose in the selection of the FLM and in ensuring satisfactory comparability. These problems arose because the budget permeates to different levels in each organisation and thus the level of management where "there is a direct involvement with budget data in the course of normal work" may be different. Further, the level of this involvement and the significance of the budget to the manager may also be different. Notwithstanding these problems, it was the researcher's view that the level of similarity between the thirteen samples of each user-group is such that the results can be compared and the companies can be aggregated to form a combined sample of each user-group.

3.3.2 Background Information about the Companies

The greater part of the time spent with the senior financial official was occupied by a semi-structured interview designed to discover background information about the company. The official was also asked if there was an "official company view" on the various issues being investigated in the study. The semi-structured interview covered the following areas:

- Company size;
- Organisation structure;
- Degree of autonomy, e.g. capital expenditure limits;
- Budget setting process;
- Use and purpose of budget;
- Existence of bonus or incentive schemes;
- Type of product and production process;
- Markets for finished goods;
- Effects of recession on company.

Frequently the discussion was wide-ranging and the official was encouraged to talk about any issue that he thought might be of interest or importance to the study.

The main use of these data was as the basis for constructing explanatory variables which might reconcile the differences found between and within the companies. Sections A and B of the questionnaire were also intended to be used in a similar manner. The aims or objectives of the company were not a subject under direct investigation in this study, but it was thought that they might be part of the explanation for results, for example, of the rôle of the budget in the company.

3.4 PRESENTATION OF THE RESULTS AND STATISTICAL TESTS

Various means of presentation and statistical tests that have been used are discussed below. The presentation of results for Chapters 4 and 5 are dealt with in the succeeding two sections.

3.4.1 Presentation of Results in Chapter 4

For the questions C1, C2, D1, D2, F2, G2 and G3 where a Likert-type scale is used, the results are presented in three forms.

3.4.1a Charts of means. Within each company and for each part of each question (e.g. for each of the seven listed purposes of the budget in questions C1 and C2), a mean score and standard deviation have been calculated. The results for all thirteen companies have been amalgamated (the 'combined sample') and the mean and standard deviation for this has

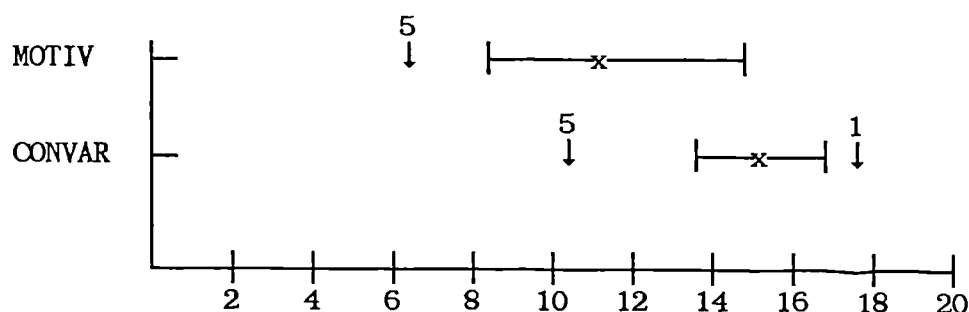
been calculated. The combined sample has been used in two ways.

- (a) As a much larger sample of budget practices in UK medium and large sized companies. For this to have any meaning, there must be some similarity between the companies. It is one of the features of this study that differences between companies have been investigated and explanations sought, so considerable care has been taken in the conclusions drawn from the combined sample. It is the opinion of the researcher, in the light of the subsequent analysis, that there are some areas of interest where the combined sample does contribute valuable insight into the issues under investigation.
- (b) To give a benchmark against which unusual results can be seen, i.e. companies whose results are different from the general pattern.

The means and standard deviations are presented in the form of charts of means of which Figure 4.2 is an example. A part of this figure is reproduced below in Figure 3.1.

FIGURE 3.1

Detail from Figure 4.2



The chart of means has a horizontal scale which is the integer score representing the Likert-type scale in the questionnaire. Different parts of the question are shown on the vertical axis. The mean of the combined sample is shown by the 'x' and the horizontal line represents the standard deviation of the combined sample. The standard deviations have been plotted centrally about the mean. Any company whose mean score does not lie within the standard deviation of the combined sample is shown by the '↓' which has the number of the company above. The companies shown with the '↓' are described as 'outliers' as they are outside the standard deviation of the combined sample, which is being used as a benchmark for normality. Whilst this is an arbitrary distinction, in practice it worked well as the vast majority of company means were within the normal range while some companies were systematically outside the range. This is discussed in Chapter 4.

The objective of the chart of means is to show simply the general picture that the results produced, in particular the overall means, with the degree of agreement being indicated by the size of the standard deviation, and also those companies who produced clearly different results.

3.4.1b Rank Data. The second form in which the results are presented is by the conversion of the mean scores in each company into a ranking for the separate parts of each question. Thus, for question C1, the mean scores for each of the seven budget purposes are used to rank the seven purposes. In this process the budget purpose with the highest mean score is given the highest ranking; so in question C1 the most important budget purpose is ranked as 7. From these data an average ranking for each purpose can be obtained by summing the rankings for each company and dividing by the number of companies. These average

rankings can be ranked to give an overall ranking based on the thirteen companies. One of the major uses of this information is as a guide to the agreement among the companies, i.e. whether the average ranks are bunched or well spread out. It is also useful in overcoming any possible scale problems between the companies, although this problem is more likely at the individual level which is discussed below.

3.4.1c Individual rankings. The third method of presenting the data is by analysing the rankings given by individual respondents in each company. It is not uncommon to find equal rankings and so some care must be taken with the results. For example, in one question there are ten companies where \geq half the respondents rank item 1 first, but also ten companies where \geq half the respondents rank item 2 first. The advantage of this means of presentation is that it deals with the individual respondents and avoids the problem of means in which one or two very unusual responses can alter the means considerably.

In sections C and D the questions C1 and D1 ask *what does occur* while questions C2 and D2 ask *what ought to happen*. The Wilcoxon matched-pairs test is used to determine if the responses to the two questions are significantly different, and a simplified chart of means shows the means and standard deviation of the combined sample for question C1 and C2 together and similarly for D1 and D2.

3.4.1d Wilcoxon matched-pairs test. The full name for this test is the Wilcoxon matched-pairs signed rank test which compares two related samples which can be ranked. The null hypothesis for this test is that the median of the population differences is zero, for a two-sided test. Significance levels can be calculated and in this case results which are

significant at 10%, 5% and 1% are shown in the table of results; Figure 4.6 is an example. The aim of the test is to indicate when there is a significant difference between the responses of the individuals for the 'actual' and 'ought to' questions. This is interpreted as evidence that the respondents are not happy with the actual situation in the company, for this particular item, and would prefer a different practice or procedure.

3.4.1e Kendall's Coefficient of Concordance. For all the rankings of means presented in Chapter 4, Kendall's Coefficient of Concordance has been calculated. In all cases the hypothesis that there is no association can be rejected at a significance level of 0.01 and thus it is concluded that there is adequate consensus among the individuals for comment to be made regarding each company as a whole. Without this result there would be no basis for drawing conclusions in terms of a company view.

The Kendall's Coefficient of Concordance tests and the Wilcoxon matched-pairs tests were run using the SPSS software operated by the South West University Regional Computer Centre (SWURC) at Bath.

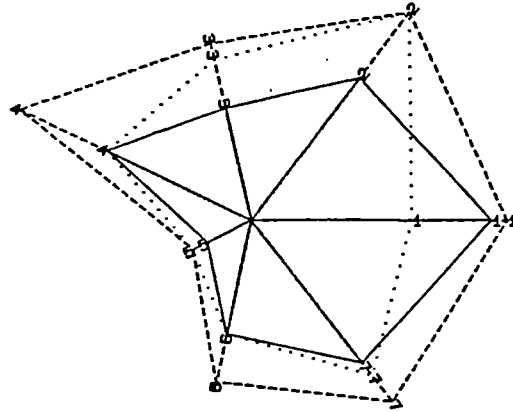
3.4.1f Classification of companies. In sections E, F and G many of the the questions require a Yes/No answer or a choice of one alternative from two. For these questions the aggregated results are usually given and the individual companies are classified by their collective response. For example, in a Yes/No question, if two-thirds or more individuals give a 'Yes' answer, the company is classified a 'Yes' company. Similarly for 'No' companies. If the 'two-thirds' rule is not met, then the company remains unclassified.

3.4.2 Presentation of Results in Chapter 5

The primary objective in Chapter 5 was to investigate the responses of the three user-groups and in particular to determine whether or not the user-groups were giving similar responses. Unfortunately, there was no single method of presentation or analysis which adequately reflected the diversity of the data and the desired analysis. Thus various methods have been used. For one aspect in particular there were no established statistical tests and this is dealt with in detail below.

3.4.2a Star Plots. This is a graphical means of presenting the data from the Likert-style questions, in which the responses of the three user-groups can be seen clearly. The plots are produced using the software package "S" under the command "starsymb" (further details are given in Becker and Chambers (1984) p. 449). The median score for each user-group is calculated for each argument (in the case of question C1, for example, this would be for the seven budget purposes) and this is represented by the distance from the origin to the point of the radius. This is done for each argument, the radius is numbered and the outer points of each radius are joined. The plot for each of the three user-groups is drawn from the same origin and this process was conducted for each company and the combined sample. An example of a star plot is shown in Figure 3.2.

FIGURE 3.2



The unbroken line represents AOCT, the dotted line SNFM and the dashed line FLM. Medians have been used in preference to means because of the non-parametric nature of the data. However, the procedure has been repeated using means and there are only minor differences which do not alter the general picture.

The major value of the star plots can be seen in Figure 5.2 where a vast amount of data can be displayed in visual form on one sheet. This allows the data to be examined at a general level and as a result a better 'feel' for the results is produced. Conclusions from this form of presentation are formed by visual inspection and are thus subjective. They play a useful rôle in the analysis but need to be supplemented by more precise statistical tests.

3.4.2b. Kruskal-Wallis test. Questions C1, C2, D1, D2 and C3 now have two dimensions : the various features or parts of the question (e.g.

budget purposes in question C1) and the user-groups. It is therefore possible to investigate differences focussing either on the parts of each question or on the user-groups over a whole question.

The Kruskal-Wallis one-way analysis of variance is a non-parametric equivalent of the more common one-way ANOVA test and is the generalisation to n cases of the Mann-Whitney test. The test was run using the SPSS package at SWURC. The null hypothesis for this test is that the responses indicate that the three user-groups come from the same population (or more precisely, that the three population distribution functions are identical).

In this test it is differences within a part of one question (e.g. for one particular budget purpose) that are revealed. The test does not indicate the cause of the difference. Further investigation must be made to discover whether the cause lies in one user-group or whether the three user-groups are all different from each other. The cut-off level of significance has been set at 10% which is at the upper end of what is usually accepted as significant. This level of significance has been chosen in the light of the small sample sizes and the nature of the data.

Before the Kruskal-Wallis tests were conducted, consideration was given to standardising the data in some form. It is generally accepted that different individuals may interpret the scale on which they answer questions in different ways. An examination of the completed questionnaires revealed that this may be so. It was clear that some had a tendency to use the whole scale, some to bunch their responses around the middle and others to use mainly the top end of the scale. There are two alternative explanations for this.

- (a) That the responses on the questionnaire correctly represent the perceptions and attitudes of the respondents; some people may consider that all the aspects of one question are important and their response is thus bunched at the high end of the scale.
- (b) that the scales have been interpreted differently and so similar attitudes are being recorded with different scores.

There is no way of determining which of these two explanations is correct or whether both are occurring at different instances.

If (b) above were a problem, then there are various methods of standardising the data to minimise the effect. Four such methods were investigated. These involve modifying the original score, x , by :

- i. $\frac{1}{\sum x_i}$ where there are i parts to each question.
- ii. $\frac{1}{\sigma_i}$ where σ_i = standard deviation of the i parts of the question.
- iii. $x - \bar{x}_i$ where \bar{x}_i = mean of the i parts of the question.
- iv. $\frac{x - \bar{x}_i}{\sigma_i}$

Each of these standardising procedures minimises a particular scale effect and none is obviously better than the others. Having examined the properties of each it was decided that method (ii) was appropriate for questions A and C and method (i) was appropriate for questions B and D. The Kruskal-Wallis tests were run using the standardised and original data. The results using the two methods were not greatly different and

it was decided to concentrate on the original data. This was on the assumption that the scale effects were not great and did not outweigh the individual's perceptions and attitudes as recorded on the questionnaire (i.e. that point (a) above has greater importance than (b)).

3.4.2c. Direct correlation. In section 3.4.2b two approaches to the issue of differences between user-groups were mentioned. The Kruskal-Wallis test indicates where there are differences in the individual parts of each question. The other approach is to investigate whether a user-group is giving a different response over a whole question. Whilst this approach seemed quite straightforward an examination of the non-parametric statistical tests and discussion with the department's research officer, who had considerable expertise in this area, revealed that there was no standard test available. The problem was to find a test which would estimate the level of agreement between two or more sample populations where the individuals in the sample had assigned ranks to two or more objects.

A review of statistical journals was undertaken by the research officer, and this revealed a further problem. Whereas there were a number of tests available, there was no consensus among the writers as to what constituted agreement. In particular, there was controversy over how much agreement, if any, there must be *within* the user-groups before agreement *between* the user-groups could be considered. This problem is reviewed in Snell (1983), the data in which comes from this study. One of the writers, Kraemer (1981), suggested that pair-wise correlation coefficients and confidence intervals could be calculated using a 'jack-knife' procedure. Having reviewed the available tests it was decided that the pair-wise direct correlation tests was the most appropriate.

Thus for questions C1, C2, D1 and D2 the correlation coefficients of the three pairs of user-groups have been calculated and are presented in Figure 5.11. From these it is possible to make a judgement as to whether any user-group is different from one or both of the others.

3.4.2d Bar charts. For the questions where Yes/No answers are required or where there is a choice of one alternative from two, the user-groups have been classified using the 'two-thirds rule' described in section 3.4.1f. This is done for each user-group in each company and for the combined sample. The results are plotted on a bar chart which enables the general pattern of the results to be seen visually. An example of a bar chart can be seen in Figure 5.8.

3.5 FINAL COMMENTS

Certain probability tests have been used at various points in Chapters 4 and 5 and these are explained where used.

It was a general intention that where possible the data and results should be presented visually as well as numerically. This is particularly important with data of the kind being analysed in this study. When the data is 'soft' in nature, usually being expressions of perceptions or attitudes, it is possible to over emphasise the statistical tests, which may be more powerful than the data can justify. With this in mind, the simple visual presentations of data, as in charts of means, star plots and bar charts, help to keep a balance between these tensions and allows a general understanding of the data to be gained before the detail is examined.

CHAPTER FOUR
THE RÔLE OF THE BUDGET AND THE RELATIONSHIP WITH
BUDGET PRESSURE AND PARTICIPATION

4.1 THE PROPOSITIONS STATED

To enable the issues that have been stated in Chapter 1 to be examined, a number of general propositions are stated at the outset of this Chapter. The propositions provide a focus for an examination of the study's results and they are based on the review of the literature in Chapter 2. The purpose of this examination is to assess the extent to which the evidence from the thirteen companies in this study supports or contradicts the propositions, and to gain new understanding of the issues under consideration.

The propositions refer to the UK and are stated in general terms. They are not to be viewed as testable hypotheses in the usual sense, as the nature of the inquiry and the limited number of companies involved renders such an approach inappropriate. One of the primary objectives of the study is to extend the current understanding of company budgeting behaviour and to explain, where possible, this behaviour. The propositions are a focus for these investigations and in a number of areas provide a basis for further more detailed research.

4.1.1 Proposition 1 : The Budget as a Forecast of Expected Performance

Section 2.2. reviewed the literature on the use of budgets as targets and section 2.3 reviewed the use of the budget as a forecast.

These sections revealed that in the academic literature the two uses were considered usual, but the potential incompatibility of adopting both rôles simultaneously was rarely discussed. Section 2.7 reviewed the UK empirical evidence on the rôle of the budget in which the forecast rôle was clearly dominant. As a result, the following proposition was drawn.

Proposition 1: The budget in UK companies is primarily intended as a forecast of expected future performance rather than a motivational target.

4.1.2 Proposition 2 : The Budget as a Control Device

In Section 2.4, which reviewed the managerial use of budgets, the rôle of the budget as a means of organisational control was stressed by many writers. Section 2.5 examined the familiar rôle of budgets as standards for performance evaluation. From these two sections and the empirical findings in Section 2.7, the following proposition was drawn.

Proposition 2: In UK companies the major rôle for the budget is as a control device through the comparison and explanation of the differences between the budget and actual results.

4.1.3 Proposition 3 : Budget Pressure

If proposition 2 is found to hold, then propositions 3a and 3b can be examined. Section 2.5.1 reviewed the literature on budget pressure from which the following two general propositions were drawn.

Proposition 3a: The use of the budget as a control device is likely to put pressure on employees.

Proposition 3b: If the pressure is great, it will be resented by employees and will result in dysfunctional behaviour.

4.1.4 Proposition 4 : Participation in Budget-Setting

The large literature on participation in budget-setting was reviewed in Section 2.6. From this it would have been possible to state many detailed and specific hypotheses for testing. However, the nature of this study is broader and thus a more general proposition is used and the detail available from the literature is employed in the analysis stage when explanations for the results are being sought. The review of the empirical data on the rôle of the budget found very little discussion of participation in UK companies. From the above the following proposition was drawn.

Proposition 4: The degree of participation in budget-setting in UK companies is not great and employees desire a greater degree of participation.

4.1.5 Proposition 5 : Explanation of Differences Between Companies

In Section 2.4 on the managerial use of budgets a few of the well-known papers which relate the contingency theory approach to budgeting were mentioned (a fuller discussion will occur in Chapter 6). From this material the final general proposition is drawn. It is important to re-emphasise that this proposition is not to be seen as a test for Contingency Theories, rather, that the Contingency Theory approach may provide insight which will help to explain differences that may occur

between the companies.

Proposition 5 : Differences in the results which arise between companies may be explained by differences in their organisation, structure and environment.

4.2 PROPOSITION 1 : THE BUDGET AS A FORECAST OF EXPECTED PERFORMANCE

This proposition is examined principally by the questions set in Section C of the questionnaire which are set out in Figure 4.1 below. The abbreviations put in brackets after each of the purposes are used in the figures, tables and text which follow. The final question, where respondents are invited to add any other purpose of the budget which they consider important, produced very few responses. These responses were very diverse and so this part of question C1 has not been included in the analysis. It would be comforting to think that this indicates that the questionnaire includes all the important purposes of the budget, but, unfortunately, pressure of time or inertia would also explain the lack of responses to this open question.

Question C1 asks directly how important is each of the listed purposes of the budget while Question C2 asks the respondent how important each purpose *ought to be*. The question is answered over the range 'not important' to 'extremely important'.

Question C3 asks the respondents to select one description of the budget from a list of six which "best describes the budget in your company". The aim of this question is to require the respondents to make a judgement about which purpose or description is most appropriate for their company, thus simplifying the picture which arises when seven

FIGURE 4.1

Questions From section C

Question C1

Budgets have a number of different purposes to fulfil in your company. Indicate how important you think each of the following purposes is for your company.

To forecast the future	(FORECAST)
To assist profit maximising	(PI MAX)
As a means by which management communicate to other levels in the company	(COMM)
To judge performance	(JUPERF)
As a means of calculating rewards	(REWARD)
To motivate employees to do better	(MOTIV)
To control performance by calculating and investigating variances	(CONVAR)
Any other purpose you think is important (please state below)	

Question C2

Now indicate how important you think each of these purposes ought to be (purposes as above).

Question C3

Which of the following best describes the budget in your company?

Average past performance	(APP)
Realistically attainable but not too loose	(RABNTL)
A target to be aimed for	(TARGET)
A forecast of expected performance	(FEP)
Performance under normal conditions	(PUNC)
Such high performance than no-one can make it	(TOOHI)

purposes are being assessed simultaneously in questions C1 and C2.

4.2.1 Question C1 : Perceived Purposes of the Budget

Figure 4.2 displays the responses to this question in summary form. Clearly the three least important purposes of the budget are REWARD, MOTIV and COMM. The low scores given to REWARD (mean of 6.27) can be better understood in the light of the data from Section E of the questionnaire which is discussed later in this chapter. REWARD has the lowest importance with MOTIV (mean of 8.34) and COMM (mean of 10.38) taking the places above. The rank data in Figure 4.3 show that in all

FIGURE 4.2

Chart of Means for Question C1

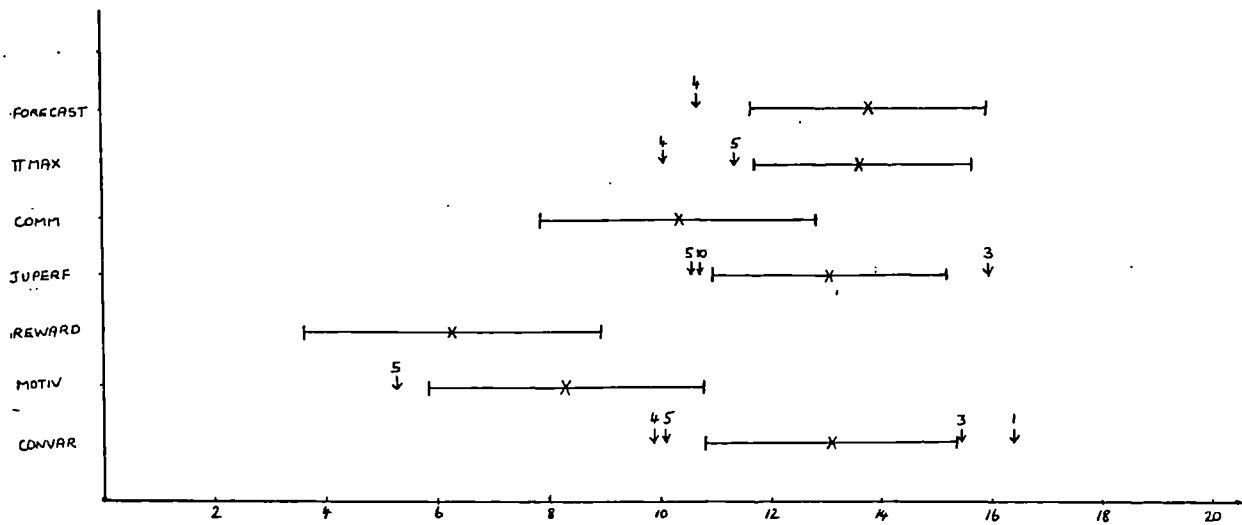


FIGURE 4.3

Rank Data for Questions C1 and C2

COMPANY	1	2	3	4	5	6	7	8	9	10	11	12	13	AVERAGE RANK	RANKING OF AVERAGE RANKS
C1 : FORECAST	6	7	4	6	7	4	6½	4	6	7	7	6	4	5.73	6
IT MAX	4	6	5	5	6	7	6½	6	7	6	5	7	5	5.81	7
COMM	3	3	3	3	3	3	3	3	3	3	3	3	2	2.92	3
JUPERF	5	4	7	7	5	6	5	5	5	4	6	5	7	5.46	5
REWARD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MOTIV	2	2	2	2	2	2	2	2	2	2	2	2	3	2.08	2
CON.VAR	7	5	6	4	4	5	4	7	4	5	4	4	6	5	4
C2 : FORECAST	5	6	6	4	7	4	5	3	7	7	5	5	4	5.23	5
IT MAX	4	7	4	7	6	7	7	6	6	6	7	7	6	6.15	7
COMM	2	2	3	3	3	3	2½	4	3	2	3	3	3	2.81	3
JUPERF	6	4	5	5	4	5	4	5	5	3	4	4	5	4.54	4
REWARD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MOTIV	3	3	2	2	2	2	2½	2	2	4	2	2	2	2.35	2
CON.VAR	7	5	7	6	5	6	6	7	4	5	6	6	7	5.92	6

but one company this ordering is found.

There are four purposes which have been given similar importance in that their means range from 13.11 to 13.83. These purposes, in descending order of means are FORECAST, π MAX, CONVAR and JUPERF; all of which relate to the traditional budget rôles of planning and financial control. The rank data shows a similar picture but with the ordering π MAX, FORECAST, JUPERF, CONVAR.

The results for the individual companies are in general agreement with the overall results. For example:

REWARD is ranked least important by $\geq \frac{1}{2}$ individuals in all companies

MOTIV is ranked least important or next to least important by $\geq \frac{1}{2}$ individuals in 11 companies

FORECAST is ranked as most important by $\geq \frac{1}{2}$ individuals in 5 companies

π MAX is ranked as most important by $\geq \frac{1}{2}$ individuals in 4 companies.

There is a further feature which is immediately apparent from an examination of the chart of means, that is, certain companies appear frequently as outliers. The features and circumstances of these companies were investigated to see if there were factors which may explain the different responses.

Company 5 has four responses which are unusually low. During the interview with the company's finance director, he stated that budgets were not an important part of the company's control procedures. The nature of its business meant that the company had to

tender for most of its business and the primary control features were the tender and its associated job cost record. A budget did exist, but it was not allocated to cost centres, and it was seen as a planning document. This job-cost/tender system was being used for purposes very similar to that of the budget in other companies, but because there was also a document called the 'budget', the questionnaire only reveals the relative unimportance of this budget but does not reveal the alternative system for control.

Company 4 has three distinctly lower responses (FORECAST, TMAX, CONVAR). In this company, budgets are primarily the responsibility of the accounting function where there is a budget officer and staff, who deal with middle-management or above. The use of budgets has not filtered down through the organisation and shop-floor control is by means of physical standards. Thus responses which give a lower importance to the budget are not unexpected.

4.2.2 Question C2 : Desired Purposes of the Budget

Question C2 asks respondents to indicate what they think the purposes of the budget *ought to be* and the chart of means for this question is shown in Figure 4.4. The general pattern is not greatly dissimilar to that found for question C1. The detailed differences between C1 and C2 will be discussed in the next section, but at the most general level, it can be seen that there are fewer outliers, that the four most important purposes are slightly less closely bunched, as are the three least important purposes.

The respondents from company 5 clearly think that their current job-cost control system is adequate and do not wish for any major change

FIGURE 4.4

Chart of Means for Question C2

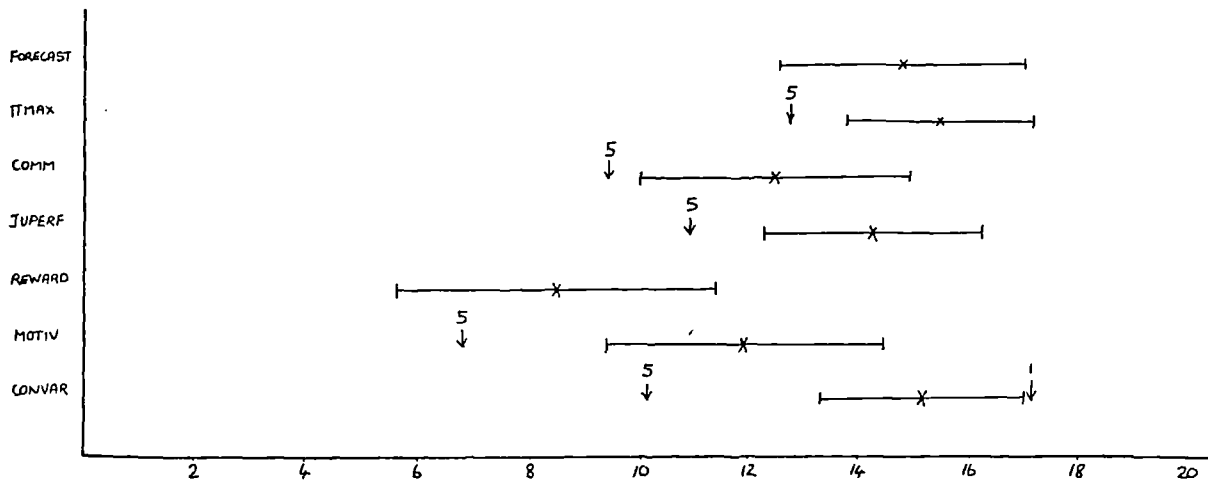
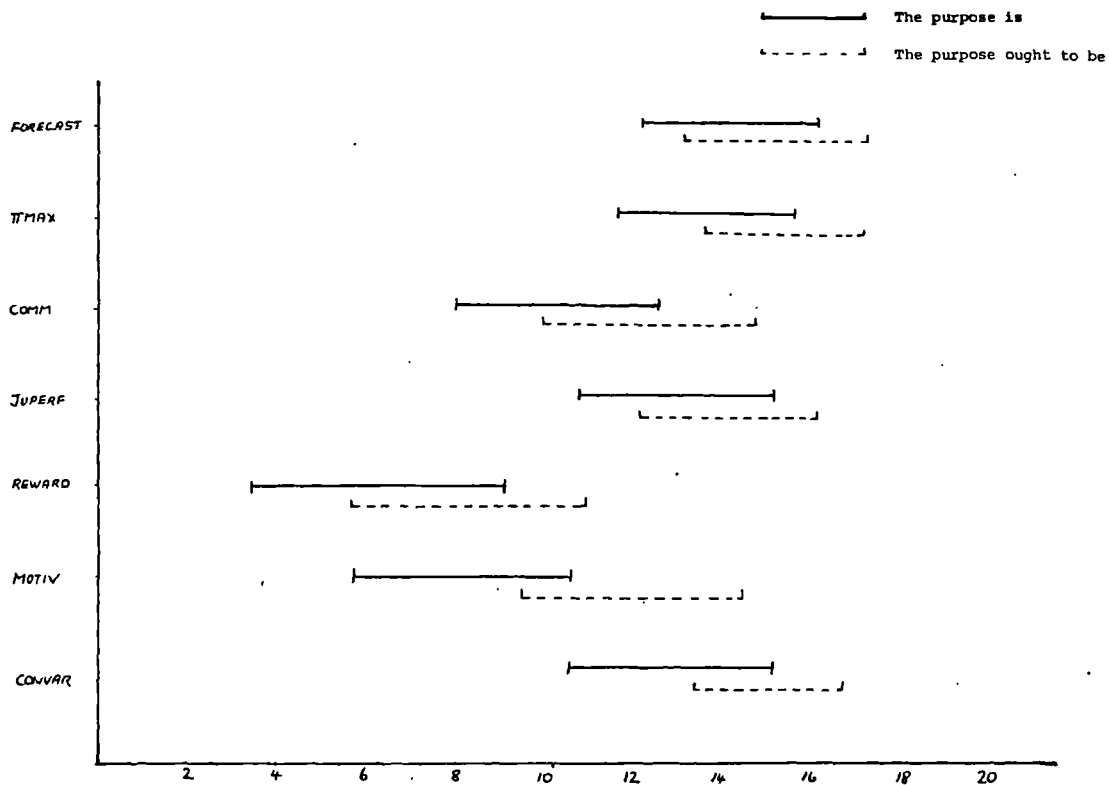


FIGURE 4.5

Graph of Questions C1 v C2



in the rôle of the budget.

4.2.3 Comparison of Questions C1 and C2

In Figure 4.5 the results shown in Figures 4.2 and 4.4 have been drawn together, without the outliers. From an examination of means it can be seen that *ITMAX* is considered the most important purpose in question C2 followed by *CONVAR* and *FORECAST*, i.e. *ITMAX* and *FORECAST* have exchanged positions. From the rank data in Figure 4.3 a slightly different position emerges as summarised below.

	QUESTION C1		QUESTION C2	
	average rank	ranking of average ranks	average rank	ranking of average ranks
<i>ITMAX</i>	5.81	7	6.15	7
<i>FORECAST</i>	5.73	6	5.23	5
<i>JUPERF</i>	5.46	5	5.54	4
<i>CONVAR</i>	5.00	4	5.92	6

ITMAX is confirmed as the most important purpose, with a higher average rank and *CONVAR*, is ranked second rather than fourth. At the individual level the responses to question C2 show the following:

FORECAST is ranked as most important by $\geq \frac{1}{2}$ individuals in 6 companies

ITMAX is ranked as most important by $\geq \frac{1}{2}$ individuals in 6 companies

CONVAR is ranked as most important by $\geq \frac{1}{2}$ individuals in 4 companies.

From the results above it is difficult to draw any firm conclusions concerning which purposes the respondents think ought to be most important or about differences between C1 and C2. These four purposes are all considered to be important and it is the view of this sample that they should be important. Perhaps it is worthy of note that IIMAX, which is seen in C2 as being worthy of increased importance and thus clearly making it the most important purpose, is very much 'business' oriented. From this sample the most important rôle for the budget should be assisting profit maximising behaviour, rather than some more technical purpose such as forecasting or control through a variance analysis procedure.

This result can be related to the findings from Section A of the questionnaire (see Appendix 1) where respondents were asked to assess the importance of eight objectives for their company. The two most important were "to stay in business" and "to maximise profits". Thus, there is some consistency between overall company objectives and the more specific rôle for the budget.

At the other end of the scale REWARD is even more clearly considered the least important rôle for the budget. MOTIV has a mean which is closer to COMM and both of these are closer to the most important four purposes already discussed. In the rank data this pattern is repeated. In these companies the budget is not used in as a basis for rewards and the respondents do not wish to see any change in this.

An interesting feature of these responses can be seen on Figure 4.5. For each of the purposes listed in C1, the 'ought to' score in C2 is greater. In other words, the respondents consider all the rôles of the budget should have greater importance. This could be interpreted as an irrational or mistaken response, though this is unlikely when the total number of respondents exceeds 200. Alternatively, it could be seen as an indicator that a general increase in the use and importance is desired. There is evidence later in the chapter which supports this alternative view. Further evidence for the desired general increase in the importance of the budget is seen in the fact that all three user-groups exhibit this pattern, although it is more pronounced among accountants.

The largest increase in the score of C2 over C1 is seen for MOTIV. The means for MOTIV and COMM are almost the same and in the rank data in Figure 4.3 there are four companies where the mean scores for MOTIV are equal to or greater than COMM. The Wilcoxon matched-pairs data in Figure 4.6 show that the increase in the scores given to the purposes listed in C2 are significantly higher in many of the companies. Using 10% as the cut-off level for significance, it can be seen that:

MOTIV has a significantly higher score for C2 in 12 companies

CONVAR has a significantly higher score for C2 in 10 companies

ITMAX has a significantly higher score for C2 in 10 companies.

In fact, only FORECAST has fewer than 6 significantly higher scores. If the data are viewed on a company basis there are some considerable differences. Company 10 has significantly higher C2 scores for each purpose, while companies 4, 7, 9 and 11 have significantly higher scores for 6 of the seven purposes. Of more interest, because it is

FIGURE 4.6

Wilcoxon Matched Pairs Test Results for Questions C1 and C2

COMPANY	1	2	3	4	5	6	7	8	9	10	11	12	13	ALL
Forecast				10						1				.1
Il Max	5	5		1			5	5	10	1	10	10	5	.1
Comm	5	1		10			1		10	5	1		10	.1
JuPerf	10	5					5		10	5	10			.1
Revard				5			10	5	10	5	5	5		.1
Motiv	1	1	1	1	10	10	1	1	1	1	1	1		.1
ConVar		5		1		10	1	10	5	5	5	5	5	.1

"1" = the difference between C1 and C2 is significant at 1%

"5" = " " " " " " " " " " " " " 5%

"10" = " " " " " " " " " " " " " 10%

".1" = " " " " " " " " " " " " " .1%

All significant results of the Wilcoxon matched pairs test have the C2 mean score greater than the C1 mean score

FIGURE 4.7

Responses to Question C3 by User-Group

Description	TOTAL	%	ACCT	SNFM	FLM
1. APP	11	5.4	2	6	3
2. RABNTL	44	21.3	17	16	11
3. TARGET	36	17.3	10	9	17
4. FEP	107	51.6	31	38	38
5. PUNC	6	2.9	4	0	2
6. TOOHI	3	1.5	2	0	1
	<u>207</u>	<u>100</u>	<u>66</u>	<u>69</u>	<u>72</u>

contrary to the general trend, is the fact that company 3 and company 5, have only one purpose where C2 is significantly higher (MOTIV) and company 6 has only two purposes. The senior financial official for company 3 stated that his company puts great emphasis on its budget and so it is not surprising that no further importance is desired. Company 5 has the job cost control system and it appears that the respondents are happy with this and do not want any increased importance for the budget. Company 6 is an oil company where external factors, which can have a great impact on performance, are difficult to forecast accurately, whereas the internal consequences of these factors are well understood. Thus the budget is not a great help in the control process and respondents do not wish it to be given increased importance.

4.2.4 Question C3 : Forecasts and Targets

The overall results to the question are shown in Figure 4.7 where the clearest result is that more than half of the respondents consider the budget is primarily a 'forecast of expected performance'. This response is found at similar levels in the three user-groups and figure 4.8 shows that in every company but two FEP has the highest response.

Companies 5 and 6 have the greatest emphasis on the forecast description. The characteristics of these companies given earlier, i.e. that both do not use their budget for control purposes, is in accord with such a result as the forecasting and planning purpose is primary. The Senior Financial Official in every company stated that their firm's budget was primarily a forecast and thus the high response to FEP was anticipated.

FIGURE 4.8

Responses to Question C3 by User-Group and Company

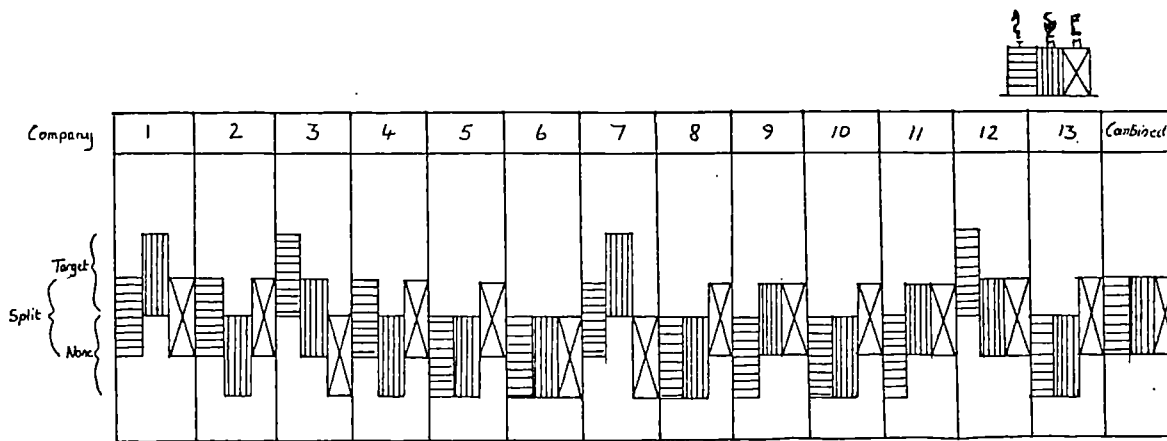


FIGURE 4.9

Responses to Question C3 Showing Target Element by Company

Company	1	2	3	4	5	6	7	8	9	10	11	12	13
Budget description with target element	10	7	9	6	2	2	9	10	6	4	7	7	4
Budget description with forecast only	8	9	8	8	14	13	7	6	11	13	10	7	10

The responses to this question can be rearranged into two groups, one in which the definitions describe the budget as a pure forecast and another where there is some element of target. The target group includes definitions 2 (RABNTL), 3 (TARGET) and 6 (TOOHI) while the forecast group contains 1 (APP), 4 (FEP) and 5 (PUNC). The rearrangement produces:

	number	%
pure forecast	124	60
some target	83	40
	<u>207</u>	<u>100</u>

This shows that 40% of those questioned chose a budget description that had some target element within it. This is considered a surprising result in the light of the Senior Financial Official's comments above and the low responses to motivational purposes in the preceding questions.

One possible explanation for this apparent inconsistency is that one of the three user-groups has a different view of the purpose and description of the budget which is not evident in the analysis of the mean responses to question C1. For example, it could be hypothesised that the FLM perceive much more of a target element in the budget, as the budget is often set by accountants or senior management at a level which FLM feel is difficult to achieve, whereas the budget setters regard the budget purely as a forecast. However an analysis of the three user-groups in Figure 4.7 reveals that this 40% who see some target element is almost equally split among the three user-groups. Thus the hypothesis is rejected.

The detailed analysis of question C3 shows that there are clear differences in the perception of the budget within the same company. It is possible that these differences represent varying perceptions of the tightness of the budget. For example, one manager may find the budget hard to achieve and so consider it a target while another may have an easier budget and view it as a forecast. In Figure 4.9 the responses to this question have been divided into the target and forecast groups and shown by company and the diversity between companies is evident.

In only four companies is there a clear response, i.e. where either the target or forecast group has two thirds or more of the responses, and even then the response is far from unanimous. In an attempt to understand this diversity a second hypothesis was examined : that the spread of replies to question C3 was related to the degree of differences between questions C1 and C2. The rationale for this hypothesis is that the spread of the C3 replies indicates confusion within the company as to the rôle of the budget and the greater this confusion the greater will be the difference between how the budget is used and how the respondents think it *ought to be used*.

This was tested by calculating for each company:

$$x_j = \sum_{i=1}^n (|C1_i - C2_i|)^2$$

and
$$y_j = \sum_{i=1}^n (C3_i - \overline{C3})^2$$

where i = individual in company j

and $\overline{C3}$ = mean response for question C3 in company j

and calculating the correlation between X and Y for all j. The correlation obtained was 0.377 and thus the hypothesis could not be substantiated and the cause of this diversity in the responses remains unexplained.

4.2.5 Further Motivational Uses of the Budget

Section E of the questionnaire seeks further information concerning the motivational use of the budget and the results from these questions will be considered before drawing any conclusion on proposition 1. The questions from section E are shown in Figure 4.10 and the results are shown in Figure 4.11.

In Figure 4.10 where 'Yes' and 'No' answers are given an arbitrary rule has been adopted to classify the companies. Where the replies to one answer (either 'Yes' or 'No') are two thirds or more of the total number of replies, then the company is classified by that response. Or, expressed differently, where the replies to one question of one type are \geq twice the replies of the other type, the company is classified by that response (i.e. a 'Yes' company or 'No' company). Where this rule is not met, the company remains unclassified.

The answers to question E1 in Figure 4.11 show that in only one company is there a financial reward based on achieving the budget. Two companies are unclassified while ten have no budget-based financial reward. These results must be treated with some care as the question is particularly sensitive to the rôle and position of the respondents in the organisation. Particularly important is that AOCT are not usually subject to a budget in the same manner as line managers. The results

FIGURE 4.10

Questions from Section E

Questions :	
E1	Do you receive any financial reward for achieving the budget you have been given (e.g. bonus, commission, etc)?
E2	Do you suffer any financial penalty for not achieving the budget?
E3	Do you receive any financial reward for "good performance" in your job?
E4	Do you suffer any financial penalty for "poor performance" in your job?
E5	Do you consider that your promotion prospects depend on your ability to achieve the budget?
E6	Do you receive any non-financial rewards (e.g. perks of some form) for achieving the budget or "good performance"?

FIGURE 4.11

Results from Section E by Company

	1	2	3	4	5	6	7	8	9	10	11	12	13
E1 FIN.REW.B	N	N	N	N	N	N	N		N		N	N	Y
E2 FIN.PEN.B	N	N	N	N	N	N	N	N	N		N	N	N
E3 FR.GOOD P	Y			N	Y				N		N	N	
E4 FP.POOR P	Y	N		N	Y		N		N	N	N	N	N
E5 PROMOTION	N					N	N		N			N	
E6 PERKS FOR B	N	N	N	N	N	N	N	N	N	N	N	N	N

The answer Y (Yes) or N (No) indicates responses 3 to a ratio of 2 : 1 in favour of that answer.
Blank indicates the responses are not clearly in favour of either alternative.

from this question by user-group are shown in Figure 4.12 and there is a small difference between the user-groups ranging from 12% of AOCT who consider there is a financial reward for meeting the budget to 26.8% of SNFM. The results for question E1 in Figure 4.11 have been recalculated excluding AOCT and the pattern does not change. Thus it is safe to conclude that the great majority of respondents (81.3%) do not receive any financial reward for meeting the budget and this pattern is seen generally across user-groups and companies.

The result from company 13, the only company to have a 'Yes' result is surprising in the light of the responses to earlier questions. In question C1, the responses to the purposes MOTIV and REWARD, whilst among the higher responses, are not distinctly different from many other companies. For question C2 the responses are closer to the overall mean than for C1. Thus the response to question E1, indicating that financial rewards are paid on the basis of budget-related performance, is not consistent with question C1, where the use of the budget for motivation or as a basis for calculating rewards is relatively unimportant and similar to other companies who answered 'Yes' to question E1. In question C3, company 13 has four people who state that the budget is a target while ten say it is a forecast. It appears that the result for E1 may be an aberration.

There is an overwhelming negative response to questions E2 and E6 which ask whether there is a financial penalty associated with non-achieving of the budget or whether there are any perks given for good budget-related performance. Question E5 is potentially of more interest as the slightly less direct link between budget-related performance and promotion has been mentioned in the academic literature and does not need any formal system to be implemented. The results here are not

FIGURE 4.12

Responses to Question E1 by User-Group

			TOTAL %	ACCT %	SNFM %	FLM %
E1	FIN. REW. B	Yes	18.6	12.1	26.8	16.4
		No	80.9	87.9	73.2	82.2
		No response	0.5	0	0	1.4
E2	FIN. PEN. B	Yes	10.5	3.0	16.9	11.0
		No	88.5	95.5	83.1	87.6
		No response	1.0	1.5	0	1.4
E3	F.R. GOOD P	Yes	46.6	42.4	47.9	49.3
		No	52.9	56.1	52.1	50.7
		No response	0.5	1.5	0	0
E4	F.P. POOR P	Yes	28.6	27.3	38.0	20.5
		No	70.9	71.2	62.0	79.5
		No response	0.5	1.5	0	0
E5	PROMOTION	Yes	40.9	13.6	63.4	43.8
		No	58.6	86.4	36.6	54.8
		No response	0.5	0	0	1.4
E6	PERKS FOR B	Yes	0.5	1.5	0	0
		No	99.5	98.5	100	100
		No response	0	0	0	0
Number of Respondents			210	66	71	73

FIGURE 4.13

Responses to Question E5 Adjusted for AOCT

Company	1	2	3	4	5	6	7	8	9	10	11	12	13
E5 per Appendix 4b	N	-	-	-	-	N	N	-	N	-	-	N	-
E5 with AOCT excluded	N	-	Y	-	N	-	N	Y	N	Y	Y	N	Y

clear with eight companies being unclassified and five responding 'No'. The arguments mentioned above, that AOCT will not usually be assessed on the basis of performance in relation to budget, also apply here. Thus in Figure 4.13 the results for question E5 are presented with AOCT excluded.

When just the two groups of managers are included five companies indicate that there is a relationship between good budget-related performance and promotion; five indicate no relationship and three are unclassified. If there is a relationship between budget-related performance and promotion, then it might be expected that the purpose, MOTIV, in question C1 would be more important to the non-accountants in the five 'Yes' companies. Unfortunately, this is not the case.

4.2.6 Conclusions for Proposition 1

Proposition 1 stated that, in UK companies, the budget is primarily intended to be a forecast of expected performance rather than a motivational target. The results from questions C1 to C3 are generally in support of this proposition. In question C1 the forecast is considered to be the most important purpose and in C3 60% of respondents chose one of the forecast descriptions as being the most appropriate for their company. When considering which rôle *ought to be* the most important, FORECAST was the second most important. The rank data showed that this general result was found in most companies, i.e. in nine companies FORECAST was ranked one of the highest two purposes.

The response to C1 and E1 indicate that the budget is not directly used to motivate and reward to any significant degree. There is some

link between budget-based performance and promotion among managers in a minority of the companies. Thus it can be seen that the rôle of the budget in motivating is slight and indirect.

Discussions with company officials revealed that in most cases the motivational procedures used were based on the firm as a whole and relied on loyalty to the firm by employees in response to the company being perceived as a good and fair employer. This was not tested in the questionnaire. The issue of motivational methods in UK companies appears to be a productive subject for further research, particularly motivation of middle and lower management who rarely participate in share options or similar motivational reward schemes.

The results considered in this section generally support proposition 1, but the comments from the following section will need to be borne in mind also.

4.3 PROPOSITION 2 : THE BUDGET AS A CONTROL DEVICE

Proposition 2, that in UK companies the major rôle of the budget is as a control device through the operation of some form of variance analysis, is also examined primarily using the questions in section C of the questionnaire. The findings presented in Figures 4.2 and 4.3 generally support this proposition. In questions C1 and C2 the purposes CONVAR and, to a lesser extent, JUPERF cover this issue.

4.3.1 Questions C1 - C3 and Proposition 2

In Figure 4.2 CONVAR has an overall mean of 13.11 while JUPERF is almost identical at 13.13. As was mentioned in section 4.2.1, these are only marginally lower scores than were given to FORECAST and IIMAX. These four purposes are almost indistinguishable in question C1. The rank data in Figure 4.3 show CONVAR ranked 4 (with average rank 5.0) and JUPERF ranked higher at 5 (with average rank 5.46). This confirms the picture seen in Figure 4.2. This general pattern is not found in all companies as the outliers in Figure 4.2 reveal. Company 5, for the reasons given in section 4.2.1, i.e. the use of a job-cost control system, not unexpectedly gives less importance to CONVAR and JUPERF. Company 3 is of particular interest as it gives higher scores for CONVAR (mean 15.53) and JUPERF (mean 16.0). The senior financial official interviewed stated that the company viewed budgets as a vital control device and considerable time was devoted to budget preparation and follow-up. Participation was actively encouraged. It would appear that this 'company view' has been accepted by those completing the questionnaire.

In question C2, which asked what the rôle of the budget ought to be, CONVAR becomes slightly more important and has the second highest overall mean of 15.17 while JUPERF is the fourth highest with a mean of 14.24. The rank data show the same picture : CONVAR is ranked at 6 (i.e. next to the highest) while JUPERF is ranked 4. Thus it would appear that, overall, respondents would be happy with increased importance being given to this control rôle for the budget, even though it has been given a high level of importance in question C1.

The combination of propositions 1 and 2 produces a picture of the

budget being used as a control device through the operation of a variance analysis system where the budget is designed primarily as a forecast of expected performance. This view is supported by the discussion with a senior financial official in each company who, in almost all cases, endorsed this composite view of the budget.

However, there are two aspects of these results which do not completely agree with this overall picture. First, there are 40% of the respondents who saw a target element in the budget and, secondly, there is the very high importance given to the purpose *IMAX*. As some of the literature reviewed in Chapter 2 suggests, there is a potential inconsistency between viewing the budget as a means of assisting in profit-maximising and using the budget as a major control device. In Hopwood (1972) and Otley (1978) the managers were divided into groups which included 'Profit Conscious' and 'Budget Constrained'. It is possible that these two emphases will not come into conflict and that careful use of the budget will be beneficial for control purposes and profit maximisation, but it is certainly not clear from the literature that this is likely to occur. Neither is it clear whether there has been any conflict between the profit conscious and budget constrained attitudes in the companies studied. The limited evidence from discussions and the very similar scores given to control purposes and the *IMAX* purpose, suggests that there is no serious conflict.

4.3.2 Conclusions for Propositions 2

The budget in these companies is generally used for control purposes and proposition 2 is therefore supported. In combination with proposition 1, it would appear that control is based on the budget being

primarily a forecast. However, there are some complications to this simple conclusion arising from the substantial minority who see some target element in the budget and from the high importance given to the rôle for the budget in assisting profit maximisation.

4.4 PROPOSITION 3a : USING THE BUDGET AS A CONTROL DEVICE CAUSES PRESSURE

As general support for proposition 2 has been found, proposition 3a, that the use of the budget as a control device is likely to put pressure on employees, can now be examined. Section G of the questionnaire contains five questions on budget pressure and these are shown in Figure 4.14.

FIGURE 4.14

Questions from Section G of the Questionnaire

Question G1

Do you feel any pressure put on you to meet the budget?

Question G2

How strong is this pressure to meet the budget?

Question G3

How much of this pressure comes from the following groups?

Top Central Management	(TCM)
Top Divisional Management	(TDM)
Accountants	(ACCT)
Immediate superiors	(IMSUP)
Yourself	(YOUSF)

Question G4

Do you think more or less pressure to meet the budget would help in attaining the company's major objectives?

Question G5

During the last year or so has any pressure on you to meet the budget increased / remained constant / decreased?

There are far more detailed instruments available to measure budget related pressure, e.g. Bonini (1962), but in the interests of questionnaire brevity these were not used. There is a dilemma in the design of the study that applies particularly to propositions 3a and 4. There are major instruments available to measure pressure and participation (e.g. Hofstede (1967) and Milani (1975)) but they are substantial and take quite some time to complete. In the initial discussions with colleagues and practicing management accountants, it was felt that the questionnaire would have to be relatively brief if it were to be acceptable to the management of the companies being approached, particularly as it was to be completed by eighteen employees in each company. Thus these simple questions were used on the existence, source and consequences of budget pressure.

4.4.1 The Existence of Budget Pressure

Question G1 asked whether the individual felt any pressure to meet the budget and the responses are shown in Figure 4.15. 75% of the respondents felt pressure to meet the budget and this was the predominant view in ten of the companies, while in none of the companies was there a 'No' response. The arguments mentioned earlier concerning AOCT not being subject to direct control by the budget may also have relevance here and so the analysis was repeated excluding AOCT. 86% of the managers felt pressure to meet the budget.

FIGURE 4.15

Responses to Question G1

DO YOU FEEL PRESSURE TO MEET THE BUDGET

COMPANY	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
YES	14	15	14	8	7	11	11	14	9	15	12	8	15	153
NO	4	2	3	4	8	4	5	2	7	2	4	5	1	51
CATEGORY	Y	Y	Y	Y		Y	Y	Y		Y	Y		Y	Y

To be categorised as "Y" (Yes) those answering the question must be $\geq 2 : 1$ in favour of that answer

4.4.2 Strength of Budget Pressure

Question G2 was intended to give an indication of the strength of the pressure to meet the budget that was being experienced by the respondents. However this question has proved to be unsatisfactory as it is difficult to analyse the replies. The overall replies, answered over the range 'very weak' to 'extremely strong', have a mean of 9.5 and a standard deviation of 6.8. The best that can be said from this is that budget pressure is not found in these companies in extreme form and that there is considerable diversity between companies and within companies.

4.4.3 Conclusion for Proposition 3a

It is clear from the results above that in the companies in this study an overwhelming majority of the respondents feel pressure to meet the budget and that this pressure is not insignificant. The previous

proposition that the budget was used as a control device was supported by the evidence and thus it is concluded that proposition 3a is also supported by the evidence from this study. As proposition 3a is supported, proposition 3b can now be examined.

4.5 PROPOSITION 3b : BUDGET PRESSURE WILL BE RESENTED AND WILL LEAD TO DYSFUNCTIONAL BEHAVIOUR

This proposition was not investigated by a direct question about resentment and dysfunctional behaviour. It was considered that asking such a question would produce a very wide range of answers resulting from different interpretations of the words in the question. The issue of resentment was examined indirectly by seeking the source of budget pressure using question G3 and dysfunctional behaviour was investigated by information from questions G4 and G5 and the questions in section F.

4.5.1 The Source of Budget Pressure

Question G3 seeks to ascertain the source of budget pressure and the results are by far the most varied in the study. Figure 4.16 displays the results in graphical form and Figure 4.17 gives the rank data for this question. The results displayed in Figure 4.16 have to be treated with considerable care as the standard deviations are large and there are many outliers, indicating considerable differences between and within companies. There are also some problems in interpreting the results as the question can be understood in different ways in different organisation structures or even in different parts of the same organisation. For example, to a member of the FLM group TDM and IMSUP may be the same person.

FIGURE 4.16

Chart of Means for Question G3

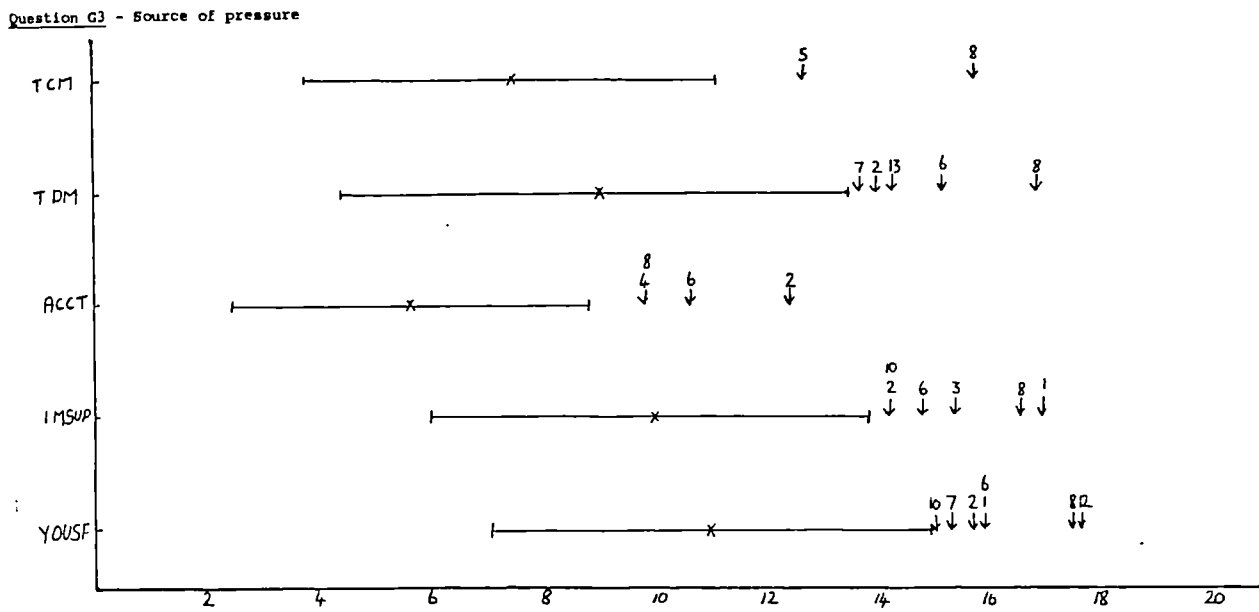


FIGURE 4.17

Rank Data for Question G3

COMPANY	1	2	3	4	5	6	7	8	9	10	11	12	13	AVERAGE RANK	RANKING OF AVERAGE RANKS
TCM	2	1	1	1	3.5	2	2	2	2	3	2	4	2	2.11	2
TDM	3	3	3	2	2	4	4	4	3	1	4	2	4	3.0	3
ACCT	1	2	2	3	1	1	1	1	1	2	1	1	1	1.38	1
IMSUP	5	4	5	4	3.5	3	3	3	4	4	3	3	3	3.65	4
YOUSF	4	5	4	5	5	5	5	5	5	5	5	5	5	4.85	5

notwithstanding these comments, there are two main implications which are clear from these results. First, that pressure from YOUSF is clearly the greatest. The mean for YOUSF is 10.5; the next group has a mean of 9.9. The rank data in Figure 4.17 show a much clearer picture as only two companies do not rank YOUSF as the most important source of pressure. This result was not predicted by the literature reviewed in section 2.5.1. This may be interesting evidence for those who advocate that self-motivation and pride in work are important but neglected characteristics of employees at all levels. There were not sufficient data to investigate this result further, but it would be a profitable area in which to conduct future research. In particular, to ascertain whether this result is an aberration and, if not, to investigate the relationship between high self-generated pressure and the motivational methods employed in companies where this occurred. This is particularly important as the academic research on this issue suggests that self-motivation produces very good performance and few dysfunctional consequences (e.g. Katz 1964).

Second, pressure from AOCT is clearly the least. This is in spite of the fact that most of these companies have accountants playing a major rôle in the setting of the budget and the subsequent monitoring of performance. These two results taken together are in strong contrast to the general picture found in the literature reviewed in Chapter 2 where pressure is usually seen as having its source in superior managers and accountants (Argyris (1952) being a classic example of this).

It is also important to note that there are substantial differences between the three user-groups on this question but this is dealt with more fully in Chapter 5.

The first part of the proposition that budget pressure will be resented is not supported by this evidence as individuals are unlikely to resent pressure which they have the power to reduce or remove if they please, i.e. it is self-generated pressure.

4.5.2 The Consequences of Budget Pressure

This issue was again approached by means of indirect questions. First was question G5 which asked whether more or less pressure would be helpful in attaining the company's major objectives. The reasoning behind this question is as before; that respondents may misunderstand terms such as 'dysfunctional consequences' and may not even be happy with the concept and so find the question impossible to answer properly. Thus question G4 was used, on the basis that if more pressure were to be desired it would indicate that the present level of pressure was not hindering the attaining of company objectives, i.e. there were no serious dysfunctional consequences.

The results for question G4 are presented in Figure 4.18, which shows that an overwhelming majority of respondents consider greater pressure to meet the budget would be helpful. 85% of those who answered this section believed greater pressure would be helpful and all the companies were classified as 'more'; there were only small differences between the user-groups. This result is best considered in the light of the response to question G5 which are shown in Figure 4.19. Only 3% of respondents stated that they had experienced reduced pressure in the preceding year, 54.5% stated that pressure had remained constant and 42.5% had experienced increased pressure. Thus the belief that increased

FIGURE 4.18

Responses for Question G4

G4 : Do you think more or less pressure to meet the budget would help in attaining the company's primary objectives?

COMPANY	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
MORE	15	12	12	12	9	10	12	8	10	15	14	11	12	152
LESS	3	5	3	0	3	1	3	3	1	1	1	1	0	25
CATEGORY ¹	M	M	M	M	M	M	M	M	M	M	M	M	M	M

FIGURE 4.19

Responses for Question G5

G5 : During the last year or so, has any pressure been put on you to meet the budget?

COMPANY	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
INCREASED	11	9	8	2	5	3	3	9	5	8	7	3	9	82
REMAINED CONSTANT	6	8	8	7	10	9	13	6	7	7	8	10	6	105
DECREASED	1	0	0	1	0	1	0	1	1	0	1	0	0	6
CATEGORY ²	I	C	=	C	C	C	C	I	C	I	C	I	C	C

1. To be categorised as "more", those answering the question must be $\geq 2:1$ in favour of that answer
2. The category here is simply determined as the answer with the largest response.

pressure would be beneficial does not result from a reduction in pressure and in three companies this view is held despite a general increase in pressure.

This conclusion is contrary to many results and theories found in the literature; Hopwood (1973) pp. 21ff, and Bruns and Waterhouse (1975) are two examples which consider decreased pressure desirable. Hofstede (1968), p.153, found that 15% of his sample thought that standards were 'fairly loose' or 'too loose'. It could be argued that this group would consider that an increase in the standard would be beneficial and that this is similar to an increase in pressure. However, although this is the closest similarity in the literature to the result found in this study, it was only 15% of the sample who gave this result as opposed to the great majority who did so here.

4.5.3 The Importance of the Budget

Further evidence concerning this proposition was gained from the questions in section F which are displayed in Figure 4.20. The first two questions suffer the same drawbacks that were described in section 4.4.2 for question G2. Nevertheless, some information can be gained from the replies. The mean response for all respondents is 15.0, the standard deviation is 3.9 and there is only one outlier (company 5). This gives a general picture in which the budget is regarded as important in attaining the company's objectives and this view is widely held. Question F2 asks how much the budget helps to improve individual performance. The mean is 10.0 and the standard deviation is larger at 5.0; there are three outliers. The very limited conclusion from this is that the budget is seen as having some rôle in helping to improve individual

FIGURE 4.20

Questions from Section F of the Questionnaire

Question F1

How important is the budget in attaining the company's primary objectives?

Question F2

How much does the budget help to improve individual performance?

Question F3

Does the budget ever hinder the improvement of performance?

FIGURE 4.21

Responses for Question F3

F3 : DOES THE BUDGET EVER HINDER THE IMPROVEMENT OF YOUR PERFORMANCE?

COMPANY	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
YES	3	6	8	6	3	3	3	3	1	5	1	1	5	48
NO	15	11	9	8	13	12	13	11	15	11	15	13	11	157
CATEGORY	N	-	-	-	N	N	N	N	N	N	N	N	N	N

To be categorised as 'N' (No) those answering the question must be $\geq 2 : 1$ in favour of that answer

performance, but there is greater diversity within and between companies than there was in the previous question.

Question F3 requires a 'Yes' or 'No' answer in response to whether the budget hinders the improvement of performance. The responses are shown in Figure 4.2.1 Overall, 77% of respondents state that the budget does not hinder the improvement of performance and in ten companies the consensus is clearly 'No'. Company 13 is the only one where the 'Yes' and 'No' responses are approaching equality. This company produced results in section C which showed a considerably greater emphasis on the budget for control purposes (see section 4.3.1). If AOCT were excluded (on the same grounds as before) this company would produce a 'Yes' response, but no others would do so and eight continue to be classified as 'No'.

The evidence available from the questions in section F suggests that the budget is not producing dysfunctional consequences. The budget is seen as important in attaining company objectives, it is moderately helpful in improving performance and the great majority do not consider that it hinders performance. Thus there appears to be no evidence that the pressure to meet the budget is causing any dysfunctional behaviour or attitudes.

4.5.4 Conclusions for Proposition 3b

The evidence reviewed above, from the responses to questions in section G and F, does not support proposition 3b. Further evidence against this proposition came from the interviews with the senior financial officials who gave no indication of any resentment or of dysfunction.

tional behaviour in their companies. Nor were there any comments on the questionnaires which would lend support.

In the companies in this study there is no evidence that pressure to meet the budget gave rise to resentment and dysfunctional behaviour. This is not in accord with the literature reviewed in section 2.5.1 but it is not surprising in the light of the results from section 4.5.1, i.e. that the most important source of pressure came from the individual himself.

4.6 PROPOSITION 4: PARTICIPATION IS NOT GREAT AND FURTHER PARTICIPATION IS DESIRED

This proposition has been examined in a similar manner, and for similar reasons, to Proposition 3 on budget pressure. In particular, none of the major questionnaires on participation has been adopted and the brief questions asked do not mention participation directly, rather they ask which groups have and ought to have influence when the budget is being drawn up. Indirectly, this yields information about the degree of participation that is perceived by the respondents and the degree of central control that exists.

4.6.1 Questions D1 : Perceived Participation in Budget-Setting

The questions asked in Section D are set out in Figure 4.22. Four particular groups were listed which, in the literature, were the major groups likely to have influence in setting the budget. The write-in fifth group was almost totally unused and there was certainly no further group that even a small minority considered had any rôle in budget-

FIGURE 4.22

Questions from Section D

Question D1

Within your company various groups will have influence when the budget is being drawn up. Indicate below how much influence each of the following groups has in your company.

Top Central Management	(TCM)
Top Divisional Management	(TDM)
People throughout the firm	(OTHP)
Accountants	(ACCT)
Any other group (please state)	

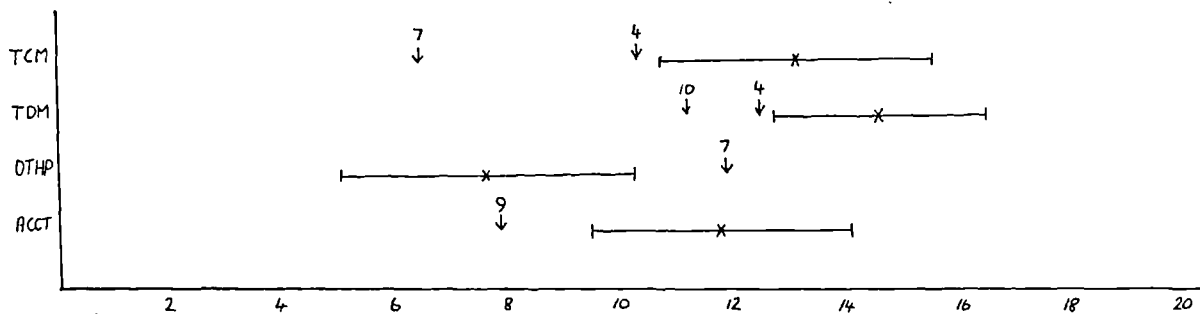
Question D2

Now indicate how much influence you think each group ought to have when the budget is being drawn up.

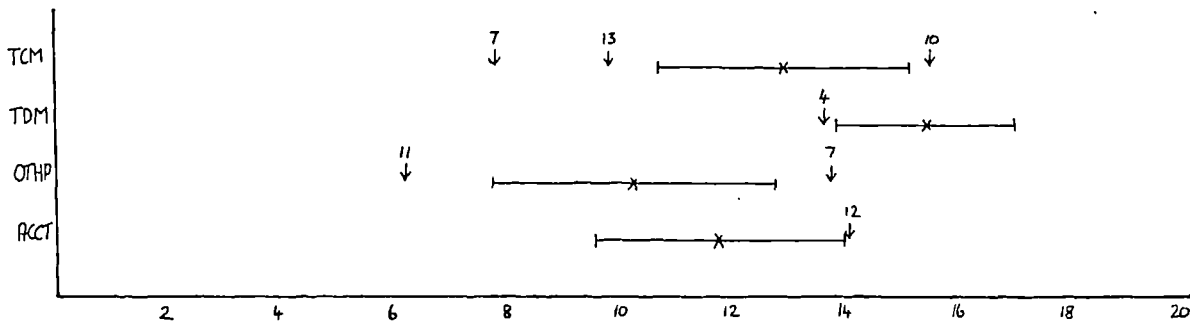
FIGURE 4.23

Chart of Means for Question D1 and D2

Question D1 - Perceived Influence



Question D2 - Desired Influence



setting.

Figure 4.23 depicts the summary results for questions D1 and D2 and Figure 4.24 shows the rank data. Company 5 does not have a TDM in its organisational structure and in all the statistical calculations this is allowed for; usually by substituting 0 for a ranking and then calculating statistics on the basis of twelve companies.

The responses to this question give a pattern that many would have anticipated and which is in accord with some typical text book descriptions of the budget-setting process. TDM have the greatest influence, followed by TCM and AOCT and much less influence being given to other people throughout the firm. At the individual level:

OTHP is ranked as having least importance by $\geq \frac{1}{2}$ individuals in 12 companies

OTHP is ranked as having least importance by $\geq \frac{3}{4}$ individuals in 9 companies.

Only company 7 does not rank OTHP as having least influence and this company produces the two clearest outliers for question D1 in Figure 4.23. There appears to be a good explanation for this result in the fact that Company 7 is one of the smaller in the sample and is family owned with many employees who have served the company for a long period. The TCM is small and not involved in daily management and it is company policy (according to the senior financial official) to allow a large input from all levels of operating management in the preparation of the budget. The results for Company 4 are also compatible with the data gathered from the company visit; this company has a budgetary

FIGURE 4.24

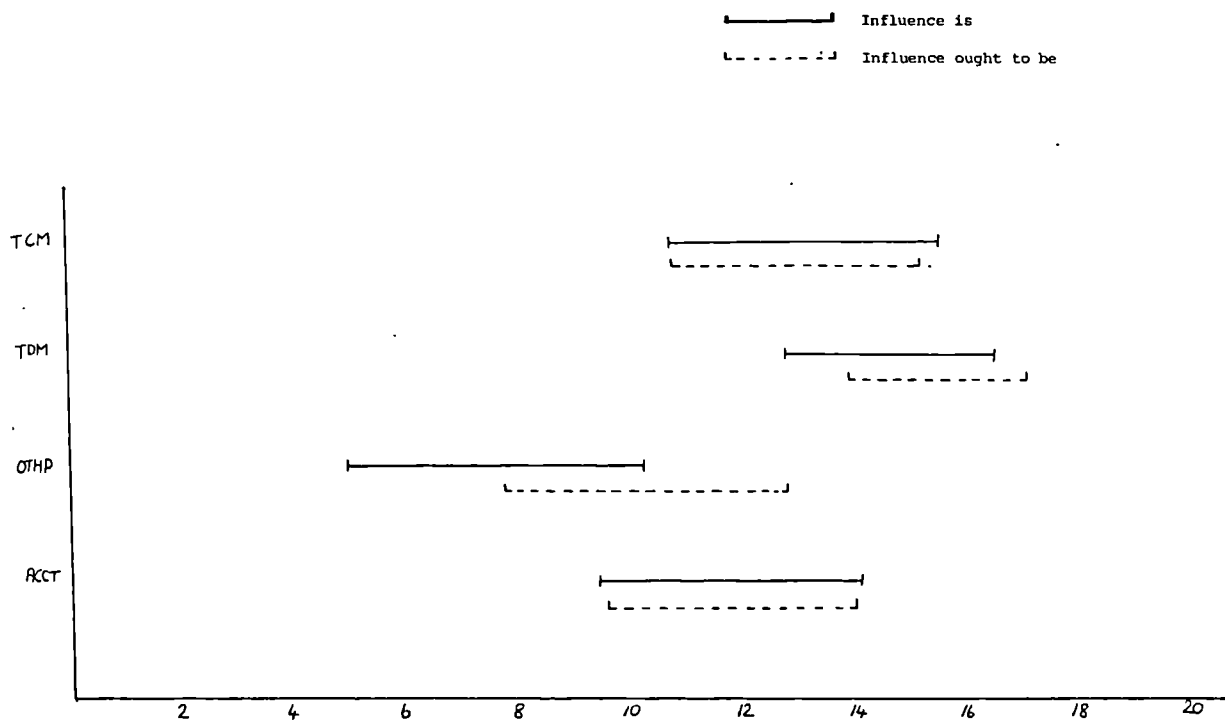
Rank Data for Questions D1 and D2

COMPANY	1	2	3	4	5	6	7	8	9	10	11	12	13	AVERAGE RANK	RANKING OF AVERAGE RANKS
D1 : TCM	3	3	3	3	4	2	1	3	4	4	3	4	2	3	3
TDM	4	4	4	4	0*	4	4	4	3	2	4	3	4	3.38	4
OTHP	1	1	1	1	2	1	3	1	1	1	1	1	1	1.23	1
ACCT	2	2	2	2	3	3	2	2	2	3	2	2	3	2.31	2
D2 : TCM	3	2.5	3	3	4	3	1	3	4	4	3	3	1	2.88	3
TDM	4	4	4	4	0*	4	4	4	3	3	4	4	4	3.54	4
OTHP	1	1	1	1	2	1	3	1	2	1	1	1	2	1.38	1
ACCT	2	2.5	2	2	3	2	2	2	1	2	2	2	3	2.12	2

*Company 5 does not have divisional management

FIGURE 4.25

Graph of Questions D1 v D2



system which is run primarily by accountants and the mean score for AOCT in question D1 is almost the same as for TCM and both TCM and TDM are shown as outliers with less influence than is normal in this sample of companies.

Only three companies do not rank TDM as having the most influence in budget-setting and the standard deviation for this group is the least indicating a relatively high level of agreement among the companies on this issue. At the individual level, TDM is ranked as having the most influence by $\geq \frac{1}{2}$ individuals in all but three companies.

4.6.2 Desired Amount of Participation

The results for question D2, where respondents are asked how much influence they think each group ought to have, produced a similar pattern to that for question D1. The ordering of means in the rank data is the same, but the pattern is less clear. There are a number of isolated outliers and also Company 7 shows the same differences that were apparent in D1, indicating that the employees are content with this rather unusual position.

4.6.3 Comparison of D1 and D2

There are a number of interesting features that arise from this comparison. The chart of means in Figure 4.25 shows a remarkable similarity in responses for TCM and AOCT. (This is also important in the light of the discussion in section 4.2.3 where all the C2 responses were greater than C1. The fact that similar or slightly lower responses exist for these two D2 questions reduces the probability that the C2 results were irrational and thus more can be read into them).

The overall result for TDM indicates that a slightly increased importance is desired for this group and the smaller standard deviation is evidence of reasonable agreement on this subject. From Figure 4.26 it can be seen that four companies have significantly higher responses for this part of the question and for the sample as a whole this is also the case, the difference being significant at the 1% level.

FIGURE 4.26

Results of Wilcoxon Matched Pairs Test for Questions D1 and D2

COMPANY	1	2	3	4	5	6	7	8	9	10	11	12	13	ALL
TCM		1†					10†							
TDM		5†		5†		10†				1†				.1†
OTHP		5†	10†		1†			5†	1†	1†	1†	1†	5†	.1†
ACCT			10†		10†	5†			10†					

"1" = the difference between D1 and D2 is significant at 1%
 "5" = " " " " " " " " " " " 5%
 "10" = " " " " " " " " " " " 10%
 ".1" = " " " " " " " " " " " .1%
 † = the mean score for D2 is greater than the mean score for D1
 ‡ = " " " " " " " " less " " " " " " "

A more distinctive difference can be seen in the comparison of the responses for OTHP. The overall mean for D2 is 10.3 in comparison with 7.67 for D1; nine companies reveal a significant increase in the score in D2; the overall difference is significant at 1% level and only 21 of the 210 respondents give a score for D2 which is lower than for D1. This is very clear evidence that in this sample there is a general feeling that other people throughout the company should have increased

influence in the setting of the budget. This pattern is seen in all three user-groups, but especially among AOCT.

Only company 2 has three or more significant differences between D1 and D2; the respondents desire increased influences for TDM and OTHP and a decrease in the influence of TCM. The senior financial official described the budget-setting process as one in which the objectives and key factors were set by TCM and budget holders (usually FLM) had to keep within these constraints. AOCT played a large rôle in the preparation of the budget and the degree of participation by lower level staff was determined by department heads. This description is compatible with the results described above.

4.6.4 Conclusion for Proposition 4

The basic elements of proposition 4 are confirmed. Participation does not appear to be widespread in these companies (OTHP is given the least influence by a large margin) and 90% of the respondents desire increased involvement of people throughout the firm. AOCT are the group who are most keen for this increased participation. This is in contrast with much of the literature which depicts accountants as seeking to control a reluctant work-force by means of a centralised budget. Argyris (1952) describes this situation in extreme form, with comments from accountants which reveal they consider the work-force and line-managers as lazy and scheming and in need of strict control.

The picture from this study is that AOCT believe there should be increased participation in the budget-setting process with the budget itself having increased importance.

4.7 PROPOSITION 5: DIFFERENCES BETWEEN COMPANIES MAY BE EXPLAINED BY DIFFERENCES IN ORGANISATION, STRUCTURE AND ENVIRONMENT

This proposition is drawn from the contingency theory literature as explained in section 4.1.5. However, the data available in this study are not such that a rigorous test for contingency theory is possible or was ever intended. Rather than this study being a test for Contingency Theories, it is the contingency approach which is being used as a source of explanation for the results that have been found. From the description of the results in the preceding sections, it is clear that these companies do not have identical uses or perceptions of the budget or the budgeting process. It is therefore necessary to seek explanations for the differences that exist *between* the companies (Chapter 5 will examine some of the differences which exist *within* the companies).

The proposition is investigated in two ways:

- (a) by examining the companies who frequently appear as outliers, i.e. those whose responses are clearly different from the majority;
- (b) by examining the pattern of results for the thirteen companies and searching for general explanatory features.

4.7.1 Explanation for individual company differences

Throughout this chapter companies which have appeared as frequent outliers on the charts of means have been examined in an attempt to ascertain factors which have contributed to the differences observed.

With the limited knowledge available from interviews and questionnaires it is not possible to fully explain such differences. However, there have been a number of examples where the background information regarding organisation, structure and environment has produced a possible explanation that is fully in accord with results in question. A couple of examples will be summarised from the discussion in various sections of this Chapter.

4.7.1a Company 5

Company 5 is unusual among this sample in that it does not use its budget for short-run control purposes. The budget is not broken down into detailed heads in each cost centre and it is used predominantly in forecasting and planning. The nature of the company's work is mainly to produce customised forms of a basic product. Work is therefore organised in batches, some of which are very large. The key control procedure is to ensure that each batch makes a profit and to do this an elaborate job-cost accounting system existed.

When the results for the questions C1 and C2 were examined, Company 5 was the most frequent outlier, in all cases giving less importance to the budget than is normal. In questions C3, 75% describe the budget as a forecast. In question G1, Company 5 is the only one which does not have a majority who experience budget pressure. Thus it is clear that the specific circumstances in which company 5 is found substantially explain its unusual results.

4.7.1b Company 4

Company 4 is the largest in this sample and the only one with a

Budget Officer and staff to operate the budget system. The budget is produced by budget staff in consultation with various levels of management and it is budget staff who prepare and explain the monthly operating statements and variances. The budget is firmly placed within the accounting function and much of the detailed control of production is by physical units rather than a financial budget.

Not surprisingly, in the light of the above, company 4 has three outliers for question C1, showing less importance being attributed to three of the four most important purposes for the budget. It would appear that outside of the accounting function the budget is not viewed as being as important as in most companies in the sample. The results for question C2 show no outliers for this company and may indicate that the respondents believe the budget in their company should have similar importance to that of others. Again there appears to be a satisfactory explanation for the unusual results of this company.

The results for company 3 in questions C1 and C2 and for company 7 in questions D1 and D2 have been described in the preceding sections and a satisfactory explanation is apparent for both. Thus, there are a number of examples where proposition 5 is substantiated at the micro-level, i.e. when explanations for individual companies are sought.

4.7.2 Explanations of the Pattern of Differences between Companies

A Contingency Theory approach, at its very simplest, suggests that there are observable relationships between various contingent factors and a company's control procedures, such that performance will be better

when there is an appropriate match between contingent factors and control procedures. The data available in this study cannot be used to test even this simple version of Contingency Theory, not least because there is no measure of satisfactory performance available. However, it is possible to examine these companies and see whether there are relationships between certain control practices and some of the contingency factors for which data were collected.

In particular, some of the differences that occurred have been examined with the hope that these may be explained by systematic differences in the contingent factors. With a sample of only 13 companies and some difficult measurement and classification problems, statistically significant relationships will only exist when the pattern is very strong.

The following method was adopted to investigate the differences found between companies. Where there were clear differences among the responses to certain questions, hypotheses were drawn up, based on the literature reviewed in Chapter 2 (and occasionally drawing on some of the literature to be discussed in Chapter 6). The relevant explanatory factor was used to divide the thirteen companies into two groups and the differences observed also produced two groups; thus a 2 x 2 contingency table was prepared. From this the probability of the results in the table occurring by chance could be directly calculated (in fact, one is calculating the probability of the null hypothesis that there is no difference between the groups). This technique, which is not without some statistical problems, was reviewed and analysed by Yates (1984). A more simple explanation, and that used in this study, can be found in Bailey (1964), pp. 61 - 65.

4.7.2a Participation and Budget Type

There were clear differences in the description of the budget given in different companies. One hypothesis is that the degree of participation in the budget-setting process is related to the type of budget, i.e. to the rôle that the budget is fulfilling. It is hypothesised that high levels of participation will be related to instances where the budget is used as a target. To test this hypothesis, the companies were divided into two categories on the basis of the replies to question C3 (which have already been categorised into 'target' and 'forecast' descriptions) and also into two categories on the basis of the degree of participation allowed in the budget-setting process. This was determined using the descriptions of the budget-setting process that were given in the interviews with the senior financial officers. Two companies were excluded because the scores for 'target' and 'forecast' were either equal or only different by one.

This produced a contingency table as below:

		<u>Participation</u>	
		<u>High</u>	<u>Low</u>
Budget	<u>Target</u>	5	0
Type:	<u>Forecast</u>	3	3

The probability of this contingency table occurring is:

$$\frac{5! 6! 8! 3!}{11! 5! 0! 3! 3!} = \frac{4}{33} = .1212$$

If the test could be viewed as a one-tail test, then this is the

relevant probability. However, in this case a two-tail test is appropriate. Therefore to this probability must be added the probabilities of any more extreme outcomes which are possible (whilst keeping the column and row totals constant). There is only one more extreme possibility, ie

	<u>High</u>	<u>Low</u>
Targets	2	3
Forecast	6	0

which yields a probability of $\frac{2}{33}$ and thus the total probability of this particular result occurring (i.e. of the Null Hypothesis that the two groups are equal) is $\frac{6}{33}$ or 0.182. As the result is higher than the highest usually acceptable level of 0.1, the null hypothesis cannot be rejected. However, with a sample as small as this it may be an indicator that there is a relationship between the type of budget and the degree of participation in the budget-setting process.

4.7.2b Participation and Other Common Contingency Factors

A number of hypotheses can be advanced concerning the degree of participation that was found in these companies. The contingency factors which were examined were:

- i. company size - measured by number of employees and turnover;
- ii. profitability - measured as return on net assets;
- iii. degree of divisionalisation.

Each of these measures was tested against participation as measured by the total score for question D1, i.e. the total influence of the four groups who have influence in setting the budget.

This relationship was tested by plotting the two scores and correlations would have been calculated had there been any possibility of a relationship between the two. In no case was there any sign of a relationship between participation and these contingency factors.

4.7.2c Participation and Results from Question D1

During the interview, the senior financial official in each company gave an 'official' view of the degree of participation that existed in his company. Question D1 of the questionnaire has been used as an indirect means of ascertaining the degree of participation in budget-setting, as perceived by a sample of members throughout the company. Two hypotheses are stated below which enable these two 'measures' of participation to be compared.

First, it was hypothesised that the companies where TDM were given the highest scores in question D1 would be those with the least participation. The rationale for this is that a high score for the influence of divisional management indicates a company in which the budget is predominantly set by senior line-management rather than one in which the budget results from general participation throughout the organisation.

The evidence from the contingency tables does not support this hypothesis.

The second hypothesis is that companies where AOCT were given the second lowest score (OTHP was given lowest score in twelve companies) were those where participation was greatest, i.e. where AOCT played a stronger rôle in the budget-setting process there was less general participation. Participation was again 'measured' by the description given by the senior financial official. The contingency table for this hypothesis is given below.

		<u>Participation</u>	
		<u>High</u>	<u>Low</u>
Accountants rôle	<u>Low</u>	5	5
	<u>High</u>	3	0

The probability of this result occurring is 0.196. However, this does not lend any support to the hypothesis as the three companies where AOCT were not ranked as having the second lowest score are all in the high participation category.

4.7.2d Relationship Between Actual and Desired Rôle of the Budget

In section 4.2.3, a comparison was made between the results of question C1 on the actual rôle of the budget and question C2 where the respondents showed what they thought the rôle ought to be (herein referred to as 'the desired rôle' of the budget). In many companies there were noticeable differences between these questions for which no explanation has yet been attempted. In five companies there are significant differences between the answers to the two questions for six or seven of the seven budget purposes listed (this is shown in Figure 4.6).

Explanation has been sought for these differences using the following reasoning. There are a number of potential factors which may explain why the respondents do not consider the budget is fulfilling the rôle that it should be. Examples of such factors include:

Size - maybe when the company is very large the problems of communication are such that employees do not know what the budget is intended to do, nor why.

Participation - where participation is great, then the budget purposes may be better understood, and have possibly been set in the light of a much wider range of views, in which case there should be less divergence between the actual and desired rôles of the budget.

The explanatory variables listed below were tested to see if any statistical relationships existed between them and the differences in questions C1 and C2. The tests were conducted by classification and the use of contingency tables from which the direct probability of a result could be calculated. The following factors were examined.

- i. The degree of participation in the budget-setting process, as 'measured' by the descriptions from the senior financial officials.
- ii. The origin of the budget; this is another possible measure of participation by determining whether the budget originates from the accounting function or from operational management.
- iii. The degree and importance of variance analysis used by the organisation, as determined by the interviews with senior financial officials.
- iv. The size of the company, measured by number of employees and by turnover.

- v. The product type, particularly its adaptability as measured by the length of the production cycle.
- vi. The market in which the company operates as determined by:
 - (a) whether predominantly UK or not;
 - (b) the effects of the recession on profitability.

The probabilities calculated from the contingency tables indicate that there is no statistically significant relationship between any of the above factors and the occurrence of large differences between the actual and desired purposes of the budget. Neither are there any non-significant probabilities which may nevertheless be interesting indicators.

4.7.3 Conclusion for Proposition 5

This proposition states that the differences between companies can be explained by differences in their organisation, structure and environment. At the micro-level (i.e. looking at individual companies), there are satisfactory explanations to account for the unusual results that occur. Thus, for all the companies which appeared as frequent outliers on the charts of means, there were factors in the organisation, structure and environment of the company which explained the situation. At this level the proposition can be supported.

However, at the second level, where more general explanatory factors were being sought to account for the pattern of differences among the companies, there was no satisfactory evidence to support this hypothesis.

4.8 GENERAL COMMENTS AND CONCLUSIONS

To conclude this chapter a number of general comments will be made which relate to one or more of the propositions that have been examined and finally the conclusions to the five propositions will be summarised.

In a survey of management accounting, Scapens (1984, p.17) comments that the practices observed in the United States should be compared with those of the companies in the United Kingdom as there appear to be differences. In this Chapter there are two aspects where such differences were apparent, namely the use of the budget as a target and the extent of and reaction to budget pressure.

4.8.1 US v UK Differences - The Budget as a Target

In section 2.7 the empirical evidence on the rôle of the budget from the UK was reviewed. This review included an examination of direct research reports, published case-studies and UK text books. The clear conclusion from this is that in the UK the budget is primarily intended as a forecast of likely actual performance which can be used for planning and control purposes.

However, in the US, the typical description of the budget can be summarised in the phrase "realistically attainable but not too loose", which incorporates some target element. This difference can be seen in Sord and Welsch (1958) which reviews budget practices in the US at the same time that Perrin (1958) wrote about UK practices. Dew & Gee (1973) report findings similar to Perrin on this matter and in contrast to the

US situation where the budget typically has some target element.

US budgeting texts, such as Knight & Weinum (1964) and Welsch (1976), tell the same story. Welsch states:

"the objectives and goals should be capable of attainment ...
(but) must represent a real challenge to the manager and the
operational unit."

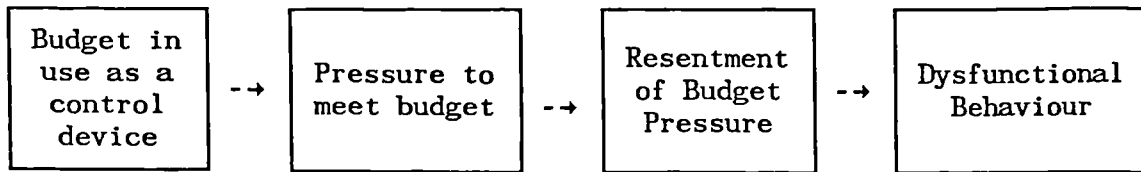
In the past there has been a clear difference of emphasis between US and UK attitudes to the rôle of the budget. It is interesting in the light of this to note that although each company 'officially' stated that their budget was a pure forecast, there is a significant minority of respondents (40%) who see some target element within the company budget. It may be that attitudes in the UK are being influenced by US thinking on the rôle and use of the budget or, alternatively, that this target element is only revealed when non-accounting functions of a UK company are examined. This has rarely been done in the past.

4.8.2 US v UK Differences : The Extent and Reaction to Budget Pressure

The second aspect where there appears to be an important difference between US and UK practice concerns the extent of and reaction to budget pressure. The academic literature on the effects of budget pressure has been reviewed in section 2.5.1 and this can be summarised in Figure 4.27 below:

FIGURE 4.27

The Traditional Understanding of Budget Pressure



However, section 4.5.2 reported that in this study 86% of the respondents stated that increased budget pressure would be desirable and there was no evidence of any dysfunctional behaviour. The traditional understanding of the effects of budget pressure is derived, in the main, from research and writing from the US. Thus, a possible explanation of the unusual results in this study may be found in the differences between the UK and the US. It may be that in the US the general level of budget pressure is higher than in the UK and is high enough for there to be general resentment and consequent dysfunctional behaviour. Whereas in the UK company ethos is different, there is less budget-based pressure producing little or no resentment. Further, the source of budget pressure in the UK is primarily personal, in contrast to the situation described in the US literature where pressure is applied by accountants and higher management.

It is also possible that the effective level of pressure in the UK is as high as in the US but, because it is self-created pressure, the individual is content with the situation and feels no resentment. A third possible explanation is that the results of this study are an aberration and there is no difference between the two countries. However, against this is the overwhelming response that pressure is not resented or the source of dysfunctional behaviour. These possible

differences between the US and the UK could not be further tested as part of the study. However, anecdotal evidence, which compares UK companies with US subsidiaries in the UK, lends further support to the existence of these differences.

4.8.3 Conclusions for Chapter 4

The major conclusions for this Chapter are restated below.

Proposition 1. The company budget is most commonly viewed as a forecast of future performance; however, there is a sizeable minority, spread through all the companies, who perceive some target element in the budget.

Proposition 2. The use of the budget as a control device through the calculation and explanation of variances was considered one of the major purposes of the budget, along with forecasting, assisting profit maximisation and judging performance.

Proposition 3a. The pressure felt by most respondents in this study was not perceived as emanating from accountants or senior management; the greatest pressure experienced was internally generated and indicates that the major motivation was personal.

Proposition 3b. There was no indication that pressure to meet the budget caused dysfunctional behaviour; in fact, 86% of respondents considered increased pressure would be beneficial, even though 97% of respondents had experience increased or constant pressure in the preceding year.

Proposition 4. General participation in the setting of the budget was not a feature generally found in these companies though, in all, there was a desire to see increased participation. This desire was most strongly expressed by accountants.

Proposition 5. The differences found between the companies could not be explained by systematic differences in their organisation, structure and environment. However, the particular unusual features of individual companies could usually be understood in the light of their particular circumstances. This may indicate that :

- (a) the relationships that could provide systematic explanations of the differences between companies are more complex than this study was able to elucidate, or
- (b) the most important explanatory features are company specific and are not likely to produce systematic explanatory relationships.

From a sample of thirteen companies it is not easy to draw general conclusions. However, on the basis of this sample, which is not unrepresentative of medium and large UK companies, these results provide a good indication of the use of the budget, the rôle and effects of budget pressure, and the extent and desire for participation in the budget-setting process.

CHAPTER 5

THE PERCEPTIONS AND ATTITUDES OF DIFFERENT USER-GROUPS

5.1 INTRODUCTION

In the preceding Chapter the rôle of the budget has been examined and the differences that exist between companies have been of particular interest. Although mention has been made of the different user-groups, in the main each company has been treated as if there were company-wide views and attitudes to the issues under examination. In this Chapter that assumption is no longer maintained and the differences between the user-groups become the focus of attention. User-groups could be defined in various ways and it was the intention at the outset of this study to choose three groups which were:

- (a) distinctly different i.e. they could be defined in such a manner that there would be little or no doubt which individuals belonged to the group ;
- (b) potentially of interest to researchers and practitioners.

The three groups that were selected as a result of these criteria have been defined in section 3. It should be apparent that not all employees will belong to one of these user-groups, for example shop-floor workers will not fall into any of these groups. The three user-groups are quite distinct in the companies that were investigated. The potential interest in these user-groups arises from the fact that they are frequently mentioned in textbooks and the academic literature on

budgeting.

In Chapter 4 the investigation was centred around five propositions and in this chapter a similar approach will be adopted. Proposition 5 concerned the explanation of inter company differences by means of various contingency factors and it is not as appropriate in this chapter. This is because the sample sizes of the user-groups within each company are small and thus it is rare that conclusions can be drawn at the company level. However, the other propositions form the basis of the investigation in this chapter but certain additional hypotheses are also required.

The reason for setting up the three different user-groups is that it was the researcher's *a priori* view that these groups might not have the same perceptions of the budget or the same attitudes to other budget-related issues. Thus the first stage is to state where such differences between the user-groups might exist and the reasons for the differences. To enable this to be done, a brief review of some of the relevant literature will be presented and some hypotheses will be stated.

5.2 BRIEF LITERATURE REVIEW

There are many areas of the literature which are relevant to the question of whether the three user-groups have or should have different perceptions of the budget rôle or different attitudes to participation or budget pressure. This review is brief and deliberately includes a number of different strands of the academic literature.

The basic issue to be considered in this review is whether the user-groups should have similar perceptions of the budget and attitudes towards the budget-related issues included in the four propositions to be investigated. Put simply, should the basic hypothesis be that the user-group have similar perceptions and attitudes, or does the literature suggest that the opposite is more appropriate?

5.2.1 Literature which Supports Agreement Between User-Groups

F.W. Taylor and his disciples developed a notion of management behaviour in what is now termed Classical Management Theory. The origins of this theory were in the manufacturing process, but others developed the principles for use in the administrative function. The theory, as put forward by Taylor, was fully authoritarian and involved all parties knowing precisely what was required of them. In the words of Taylor (1911):

"...to work according to scientific laws, the management must take over and perform much of the work which is now left to the men; almost every act of the workman should be preceded by one or more preparatory acts of the management which enable him to do his work better and quicker than he otherwise could." p.26

"Under Scientific Management the 'initiative' of the workmen (that is their work, their goodwill and their ingenuity) is obtained with absolute uniformity and to a greater extent than is possible under the old system...." p 36

When this principle is applied in the budgeting context, it implies that all parties will view the budget in the same light, i.e. that management has effectively communicated its view of the budget and this has been accepted by all other parties.

At the same time that Taylor was advocating the ideas that he later developed into Classical Management Theory, Henri Fayol was advocating a complementary theory of company administration and management. In Fayol (1949), first published in French in 1916, he specifically considers the rôle of planning and forecasts. The planning system advocated by Fayol has a high management input, but also has some degree of participation. One of the rôles of the forecasts is to ensure 'unity' within the organisation. He also comments:

"The study of resources, future possibilities, and means to be used for attaining the objective call for contributions from all departmental heads within the framework of their mandate ... Knowing what are its capabilities and its intentions, the concern goes boldly on ... "
(Fayol (1949) p.48)

This is an example that complements Taylor and is typical of many writers in the first half of the twentieth century. In these writings, budgets, or similar devices such as plans and forecasts, are designed to communicate and unify and there is the clear implication that all managers will have a similar understanding of their rôle within the organisation.

Rensis Likert has proposed his own style of 'science-based' management theory which is in almost complete contrast to Taylor. He has proposed a highly participative style of management which he believes would be effective in all situations in the long-run. This 'System 4' has the following characteristics according to Likert (1967, pp. 4-10).

Organisational Variable

System 4 Implementation

Amount of responsibility felt by each member of organisation for achieving organisation's goals

Personnel at all levels feel real responsibility for organisation's goals and behave in ways to implement them.

Direction of information flow

Down, up and with peers

Amount of cooperative teamwork

Very substantial throughout the organisation

Extent to which the review and control functions are concentrated

Quite widespread responsibility for review and control ...

Extent to which control data are used ...

Used for self-guidance and co-ordinated problem solving and guidance.

An organisation which operates on a 'System 4' basis will have considerable unanimity on important features of its control and decision-making processes. Thus, one would expect that there would be agreement between the user-groups in the areas to be examined in this chapter. However, it should also be noted that Likert recognises the existence of systems 1-3 which are very different in character and in which agreement and cooperation between the user-groups is frequently absent. System 1 is very similar to Taylor's view of the organisation, however, Likert insists that System 4 is universally better in the long term.

P.F. Drucker is typical of a school of thought which has produced many prescriptive management texts. Drucker draws on Classical Management Theory, but insists that it needs to be updated as it has become moribund in the hands of over zealous followers of Taylor. He sees motivation and communication as the two vital tasks for management. Particularly, he describes the rôle of the manager in the following manner.

"Next a manager motivates and communicates, he makes a team out of people that are responsible for various jobs. He does that through the practices with which he manages. He does it in his own relation to the men he manages. He does it through incentives and rewards for successful work. He does it through promotion policy. And he does it through constant communication, both from the manager to his subordinate and from the subordinate to the manager." (P.F. Drucker (1968) p.410)

Such a view of the managerial process, one which highlights upward and downward communication, is consistent with the hypothesis that the user-groups will have similar perceptions of the budget.

The final writer to be reviewed in this section is Charles Handy who has made comments which form a bridge between this section and the next. Handy discusses various forms of organisational culture which he describes as:

"the feeling of a pervasive way of life or set of norms. In organisations there are deep-set beliefs about the way work should be organised, the way authority should be exercised, people rewarded, people controlled."
(Handy (1985) p.186)

Where such a culture is strong and the beliefs are well understood and shared by the members of the organisation, then there is a high probability that differences in perceptions and attitudes towards budget-related matters will be greatly reduced. This argument does not rely on any particular culture but can be equally effective in a variety of different cultures as long as they are well-established and pervasive.

In a later chapter of his book, Handy discusses 'goal diversity', by which he means the degree to which individuals, or departments and divisions within the company, subscribe to one set of goals. He states that this is

"... what Lawrence and Lorsch have called differentiation. They have shown that internal differentiation is more appropriate, and more common, when the market environment or technology is changing more rapidly."
(Handy (1985) p.300)

Handy further argues that individuals find it easier to identify with smaller groups, thus "buried deep in a functional specialism it is hard to feel committed to the aims of the total organisation." The sub-goals of many, if not all, companies, will include rôles or purposes for the budget. So, if the arguments quoted by Handy have any substance, they form two reasons why there may not be agreement between the user-groups on the rôle of the budget. These reasons are:

- (a) Under conditions of a changing environment there will be internal differences (i.e. between individuals or departments) concerning the objectives of the company and this is likely to include the objectives or purposes of the budget.
- (b) Where smaller units within the organisation develop cohesion, the individual is likely to work towards the goals of the smaller unit, which may well not be the same as the stated goals of the organisation.

This brief review suggests that there are reasons which may justify a basic hypothesis that the three user-groups will have similar percep-

tions of the rôle of the budget and similar attitudes to the budget related issues under examination in this chapter.

5.2.2 Literature Which Does Not Support Agreement Between User-Groups

Samuelson (1986) argued that negative attitudes towards budgetary control systems have been frequently encountered by researchers and that one of the major reasons for this is "the coexistence of different expressions of the rôle of the budget at one point in time". He suggested that a budgetee may be able to observe several expressions of the rôle of budgeting, in particular:

- (a) *The rôle articulated by senior management.* This can be seen in the "statements made in budget manuals or similar official documents" and in "the pronouncements made by senior management".
- (b) *The real rôle of budgeting* can be inferred from the specific demands placed on budgetees during the budget control process. This will "emerge from detailed observations of the uses which senior management makes of the budget and the budgetary process". Several real rôles may exist although one will usually dominate.
- (c) *The rôle intended by senior management.* Samuelson does not consider this rôle as important in explaining the budgetary system as the preceding rôles. However, "intentions can influence both technical practices and the organisational processes surrounding the budget" and "can shape the expectations that are held of a system".

Samuelson observed that in some companies there was no discrepancy between the rôles of the budget. This was particularly in industries such as steel and wood pulp, i.e. heavy industry with low profit, low uncertainty and strong centralised management. In other industries, such as metal-working and engineering, this discrepancy in budget rôles was apparent. These companies had been structured into profit centres where the articulated rôle was planning (as was the case for the heavy industries) but the real rôle appeared to be responsibility control.

Samuelson advanced an explanation for the existence of different rôles. He noted that the planning rôle and the *responsibility control* rôle belong to different organisational paradigms and contain inherent conflicts if they are used in parallel in the same organisation. Further, these paradigms may be appropriate to different environments. Samuelson also suggested that these conflicting rôles may result from a chronological process. At different times in the past, circumstances have required different rôles for the budget. However, it is much easier to create a new rôle for the budget than it is to end an existing one, thus rôles multiply and exist in parallel. The previous rôles may remain due to inertia or because management choose to change the real rôle even if the articulated rôle remains unaltered.

Thus it is a clear conclusion in Samuelson's paper that companies, particularly those which have decentralised profit-centres, may have multiple rôles for the budget and that different user-groups may be influenced by different rôles.

Many writers who adopt a Contingency Theory Approach to organisations have advanced reasons why differing perceptions of the budget may be evident within a single organisation. For the purposes of this brief

review Mintzberg (1979) will be taken as a typical example. In discussing the divisionalised form of organisation, Mintzberg shows that there is a strong set of forces which encourages central management to usurp divisional powers and so defeat the purpose of divisionalisation. Divisional management have access to a different information set which is superior to that available to central management. For,

" ... a good deal of the information needed for formulating strategies is soft and speculative - bits and pieces of information, rumour and the like that never get documented or quantified. What the MIS carries back to headquarters are abstracted, aggregated generalisations." (Mintzberg (1979) p.419)

This argument applies directly to the budget in many of its rôles. Central Management may have to rely on the budget as a primary source of information and as a major control device in the absence of anything better. While members of a division will have access to better information and more personal contact. The result is likely to be different perceptions of the rôle of the budget.

Parker (1978) has examined the rôle of communication in organisations and in corporate budgeting systems in particular. He argues that a frequent cause of communication failure is "bypassing" which occurs when individuals refer to an apparently common topic but in fact have in mind different subjects. Parker states:

"Bypassing can easily occur when two people use the same words to mean different things." (Parker (1978) p.197)

In the context of budgeting words such as the 'budget' may be used

by individuals, or user-groups, who attach different underlying meanings to the words. Different underlying meanings may produce different attitudes to budget-related issues and different perceptions of the purpose of the budget.

From the brief review presented in this section it is clear that there are substantive contributions to the literature which state or imply that different user-groups within an organisation may have different perceptions and attitudes towards the budget.

5.2.3 Comments on the Literature Review

The review of the literature was undertaken with the objective of developing an appropriate hypothesis concerning the perceptions of the budget by three user-groups. Unfortunately this review has demonstrated that the literature contains great diversity on this matter and there is no consensus as to whether different user groups should have the same perceptions and attitudes. There is certainly no agreement as to whether they will, in practice, have similar views.

The review of the literature has not included any comments on the possibility of budgeting system failure. There are some writers who clearly believed that in a well run organisation there should be a high degree of unanimity on the rôle and purposes of the budget. However, differences may result from the failure of management and others to operate the system properly. This adds a further complication to the setting of an appropriate hypothesis and the analysis of the results of the study.

Another complication arises if it is thought inappropriate to determine a single hypothesis that will be appropriate for all the propositions which will be examined. For example, there may be good reasons why the three user groups should have different attitudes towards the existence and consequences of budget pressure, but far fewer reasons for a difference in perceptions of the basic rôle and purpose of the company budget. Similarly, as has already been mentioned in Chapter 4, there are reasons to suppose that accountants will not be assessed on the basis of budget-related performance to the same extent as first-line managers. The nature of the work carried out by accountants is the basis for this difference.

In the light of the above comments, it has been decided not to state the hypotheses regarding perceptions of the different user-groups in general terms. Rather, it will be more appropriate to state a hypothesis in relation to each of the propositions as they are examined. The appropriate hypothesis will be formed in the light of the literature reviewed above and the results presented in Chapter 4.

The analysis and conclusions in this chapter will be more tentative than those in Chapter 4 and will often be of a more exploratory nature. The literature on direct differences between the user-groups in relation to budget-related issues is scarce, which makes it difficult to form hypotheses. From the data available in this study it will only be possible to highlight interesting questions in some of the areas investigated although in others tentative conclusions may be drawn.

5.2.4 Approach to the Analysis of User-Group Responses

For each of the hypotheses that will be stated, the first stage of analysis will be to use the combined sample of the thirteen companies. In so doing, the data are being treated as samples from each of the three user-groups rather than samples of particular companies. Having examined the results from the combined sample, the results for individual companies by user-groups will be examined.

Comment on the results of the combined samples will be made and explanations sought where possible. However, no detailed examination of the data at the individual level will be reported. Some considerable time has been given to examining the individual company results and attempting to record and explain the differences found. It has been concluded that the data and the results are not sufficient to enable this examination to produce any comprehensive conclusions. There are a few clear instances where a conclusion or comment can be made and these are reported. The statistical tests used and methods of presentation adopted have been explained in Chapter 3.

5.3 PROPOSITION 1 : THE BUDGET IS A FORECAST OF FUTURE PERFORMANCE

Proposition 1 states that in U.K. companies the budget is primarily intended as a forecast of future performance rather than a motivational target. In Chapter 4, the evidence gave general support to this proposition.

5.3.1 The Null Hypothesis for Proposition 1

Before proceeding to an examination of the differences between user-groups a hypothesis concerning these differences must be stated. The review of the literature in section 5.2.1 supports the view that in

a company which is operating effectively there will be a clear understanding of the rôle of the budget. The literature in section 5.2.2, especially the article by Samuelson, casts some doubt on this. Nevertheless the conclusions from Chapter 4 and the literature in section 5.2.1 have led to the following hypothesis.

Hypothesis for proposition 1 : The three user-groups will have a similar view of the budget as a forecast of future performance rather than a motivational target.

5.3.2 Questions C1 to C3 - The Purposes of the Budget

These questions are set out in figure 4.1 or can be seen in the full questionnaire in Appendix 1. The responses of the three user groups to question C1 are compared by using the Kruskal-Wallis test, results for which are given in Figure 5.1. The responses are presented graphically in the star-plots shown in Figure 5.2.

The results for the budget purpose FORECAST indicate that there is not a significant difference between the three user-groups for the combined sample, and there is only one company where there is a significant difference for this budget purpose. This result is also seen in the star plot for all thirteen companies in Figure 5.2. For question C1 there are significant differences between the user-groups for five of the seven budget purposes.

The mean responses of the user-groups to questions C1 and C2 are shown in Figure 5.4. The SNFM appear to give FORECAST less importance in questions C1 but the results of the Kruskal-Wallis test indicate this is not significant. Some care must be taken when comparing means with

Figure 5.1

ANALYSIS OF KRUSKAL-WALLIS TESTS ON ORIGINAL DATA

Question C1 - The Purpose of the Budget

Company Purpose	Combined	1	2	3	4	5	6	7	8	9	10	11	12	13
FORECAST	-	-	-	-	-	-	-	5	-	-	-	-	-	-
ITMAX	1	5	-	-	10	5	-	-	5	10	10	-	-	-
COMM	1	-	-	-	-	10	-	-	-	-	-	10	10	-
JUPERF	-	-	-	-	-	10	-	-	-	-	-	-	-	-
REWARD	1	10	-	-	-	5	-	-	-	-	10	10	-	-
MOTIV	5	10	-	-	-	10	-	10	10	-	-	-	-	-
CONVAR	5	-	-	10	-	5	-	10	5	-	-	-	-	-

Question C2 - What Ought to be the Purpose of the Budget?

Company Purpose	Combined	1	2	3	4	5	6	7	8	9	10	11	12	13
FORECAST	5	-	-	-	-	-	-	-	-	-	-	-	-	-
ITMAX	-	5	-	-	5	-	-	5	-	-	-	5	-	-
COMM	-	5	-	-	-	-	-	-	-	-	-	-	-	-
JUPERF	-	-	5	-	-	-	-	-	-	-	-	-	-	-
REWARD	1	5	-	-	-	5	10	-	-	5	5	-	-	-
MOTIV	-	10	-	-	-	-	-	-	-	-	-	-	-	-
CONVAR	-	-	5	-	-	5	-	-	-	-	-	-	-	-

- 10 = A significant difference exists between the three groups at a 10% level of significance.
 5 = A significant difference exists between the three groups at a 5% level of significance.
 1 = A significant difference exists between the three groups at a 1% level of significance.

Figure 5.2

Star Plots For Question C1

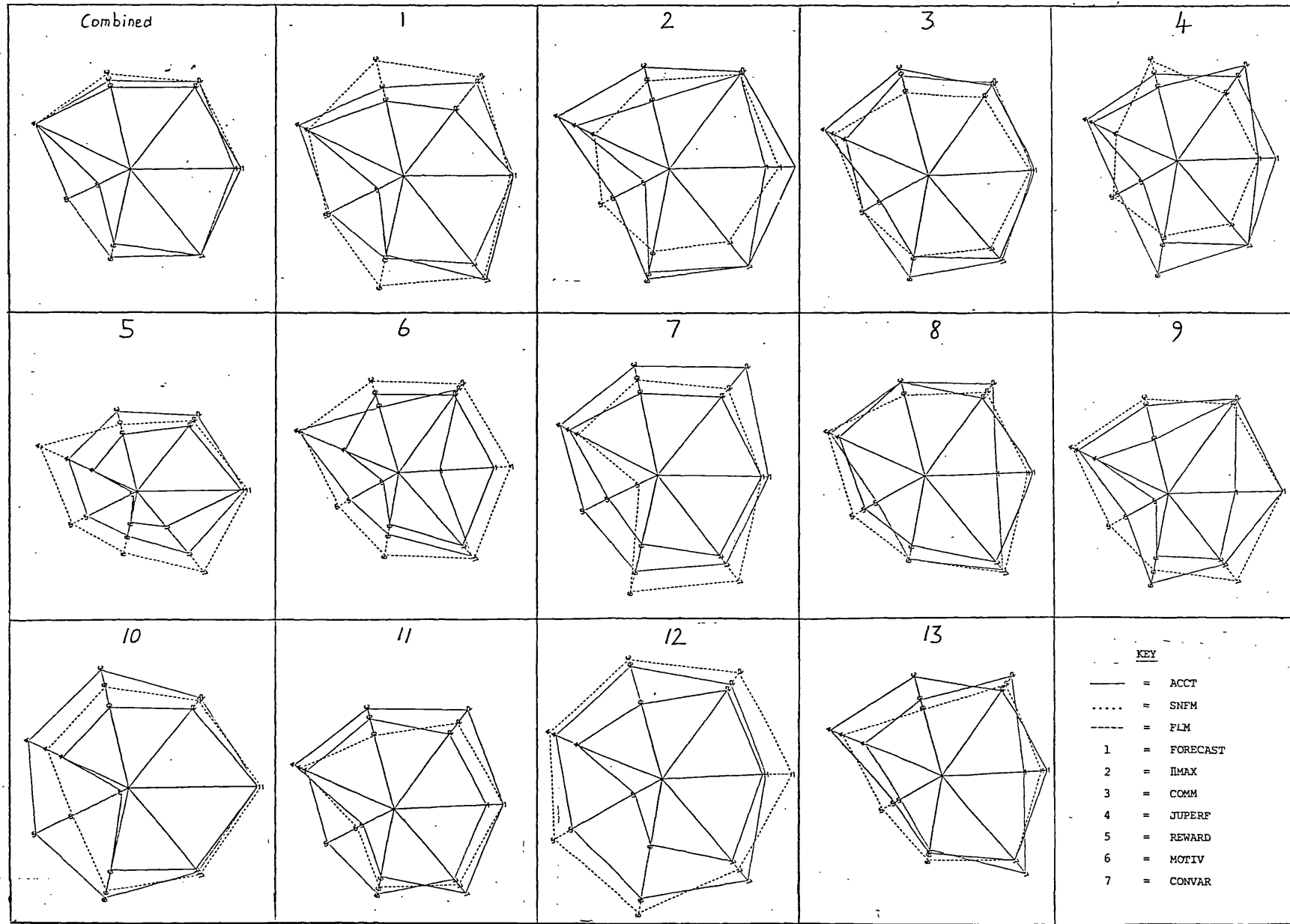
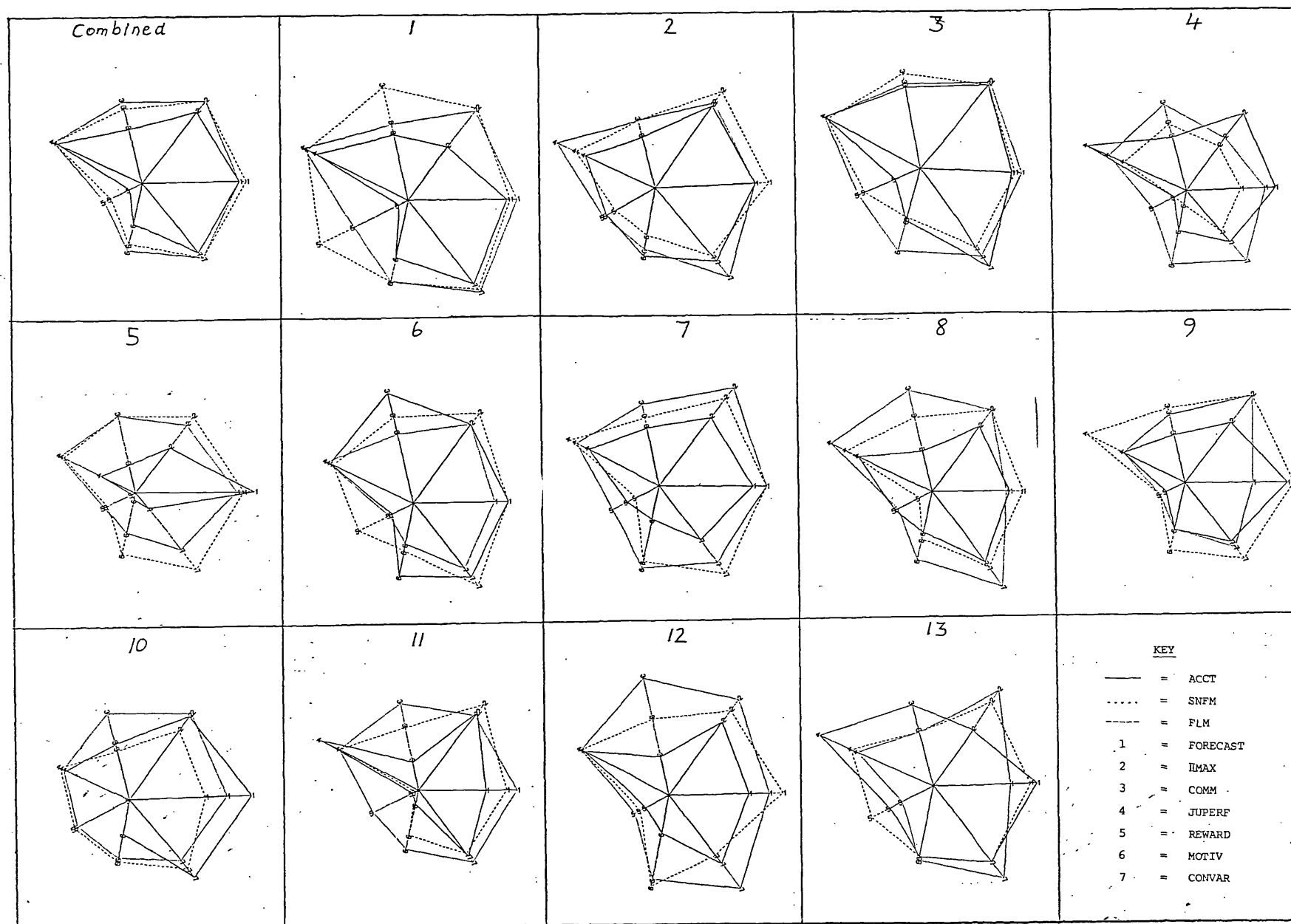


Figure 5.3
Star Plots For Question C2



the Kruskal-Wallis test results as these are computed using rankings of all the individuals. Occasionally, there appears to be a relatively large difference in means but no significant differences are indicated by the Kruskal-Wallis test results; the opposite also occurs.

FIGURE 5.4

The Mean Responses of the User-Groups to Questions C1 and C2

	Budget Purpose	MEAN SCORES			
		Combined	AOCT	SNFM	FLM
Question C1	FORECAST	13.83	14.11	13.01	14.36
	ITMAX	13.75	12.06	14.64	14.11
	COMM	10.38	8.73	11.44	10.84
	JUPERF	13.13	12.58	13.42	13.34
	REWARD	6.27	4.41	7.28	6.96
	MOTIV	8.34	7.0	9.41	8.52
	CONVAR	13.11	12.03	14.21	13.01
Question C2	FORECAST	14.77	15.3	13.49	15.51
	ITMAX	15.46	14.67	16.11	15.53
	COMM	12.43	11.86	12.72	12.67
	JUPERF	14.24	14.21	14.42	14.08
	REWARD	8.52	6.27	9.25	9.84
	MOTIV	11.90	11.52	12.21	11.96
	CONVAR	15.17	15.02	15.41	15.08

The Kruskal-Wallis results for question C2, where respondents are asked to show how important they think the various budget purposes *ought to be*, indicate a significant difference between the user-groups for FORECAST. In Figure 5.4 it can be seen that the mean score given by

SNFM is noticeably lower than the other user-groups. The conclusion drawn from this is that senior managers would prefer the forecasting element of the budget to have less importance than the other two user-groups.

The second part of the proposition is concerned with the budget as a target. The budget purposes MOTIV and REWARD may give an indication of whether the user groups have different perceptions as to the use of the budget as a target. For question C1, using the combined sample, there are significant differences between the user-groups according to the Kruskal-Wallis results. The mean scores from Figure 5.4 indicate that it is AOCT who are the cause of the difference as they give noticeably lower scores for both of these purposes. Also for both purposes there are four companies where there are significant differences between the user-groups. For seven of the eight instances it is AOCT who are giving noticeably lower scores while in the eighth AOCT and FLM both give very low scores.

Question C3 asks the respondents to select one of six descriptions which best suits the budget in their company. As in section 4.2.4, these six descriptions can be combined into definitions which contain a target element and those which do not. The result of this amalgamation is shown in Figure 5.5.

FIGURE 5.5
Responses to Question C3 by User-Group

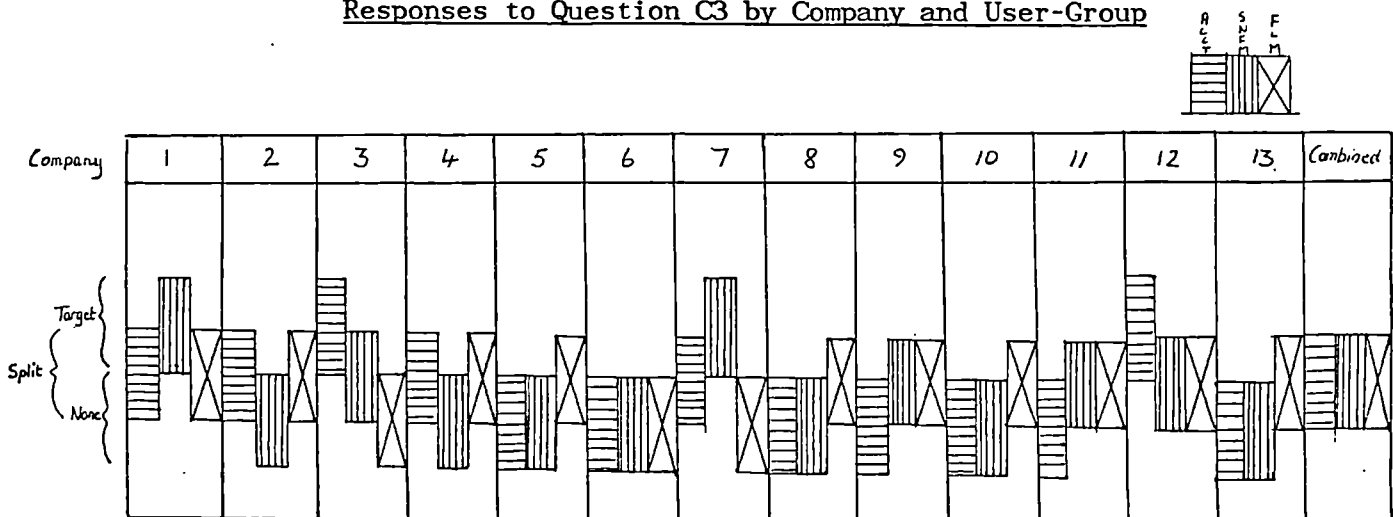
	AOCT	SNFM	FLM	
Pure Forecast	37	44	43	124 (59.9%)
Target Element	29	25	29	83 (40.1%)
	66	69	72	207

The table in Figure 5.5 can be used to test the null hypothesis that the three groups come from the same population. This is done by testing whether the observed proportions in the three groups are significantly different from the expected proportions based on the whole sample. For the table in Figure 5.5, $\chi^2 = .834$ which with 2 degrees of freedom is not significant. Thus the null hypothesis cannot be rejected.

This result indicates that the three groups are not systematically different in their view of the budget. In Chapter 4 it was seen that there is a major divergence in opinion as to whether the budget is best described as a pure forecast or at least partially a target, but this difference is not explained by differences between the user-groups. The individual companies can provide further evidence on this matter. Figure 5.6 uses the data for C3 in the amalgamated form. Each user-group is classified as 'Target' if $\geq \frac{2}{3}$ of respondents give that response; 'None' if $\geq \frac{2}{3}$ of respondents gave a description which included no target element or 'Split' if this 'two-thirds' rule was not met and the user-group was split between the two descriptions. This is similar to the procedure adopted in section 4.2.5.

FIGURE 5.6

Responses to Question C3 by Company and User-Group



The results in Figure 5.6 reveal that 18 of the 39 user-groups have a split response and 17 see the budget as a forecast. Only 4 groups describe the budget as a target. Thus there are only isolated cases where a user-group describes the budget as having any target element and in general there are no systematic differences between the user-groups at the individual company level.

5.3.3 - Other Motivational Features of the Budget

Further evidence concerning the motivational use of the budget can be gained from the questions in section E of the questionnaire which are set out in Figure 4.10.

Question E1 asks whether there is a financial reward for achieving the budget and the responses to this question are shown in Figure 5.7.

Figure 5.7

Responses to Question E1 by User-Group

"Do you require any financial reward for achieving the budget ...?"

	AOCT	SNFM	FLM		
YES	8	19	12	39	(18.7%)
NO	58	52	60	170	(81.3%)
	66	71	72	209	

The same test as was used on the table in Figure 5.5 can be used here. This produces the result :

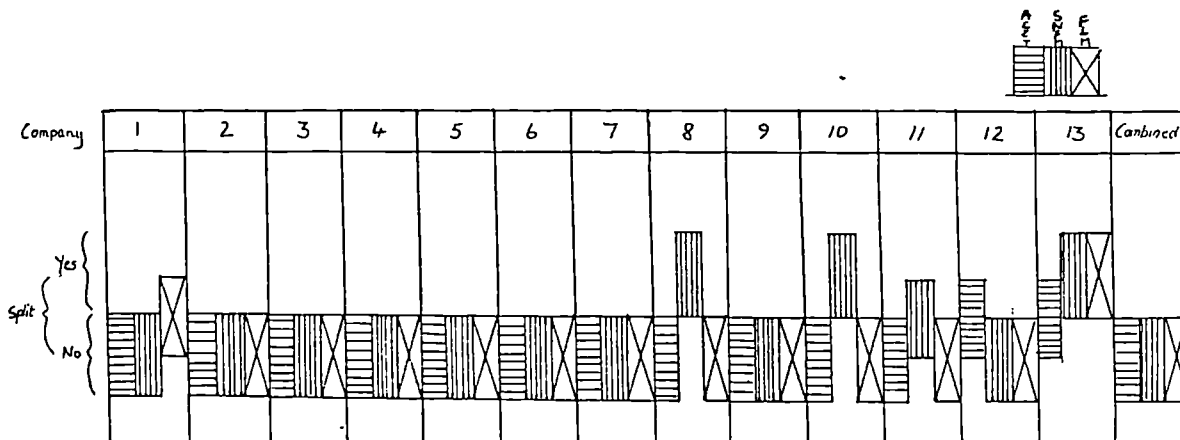
$\chi^2 = 5.09$ which with 2 d.f. is significant at 10%.

Thus there is some evidence that the groups differ on this issue. The general result is that the budget is not used as a basis for paying financial rewards. However, 26.8% of senior managers do believe that financial rewards are related to budget achievement.

This question can also be examined at the individual company level. To do this the user-groups are classified as 'Yes' or 'No' by the two-thirds rule' applied earlier or they remain unclassified if the rule is not met. The responses for question E1 are shown in Figure 5.8.

FIGURE 5.8

Responses to Question E1 by Company and User-Group



The clear conclusion from Figure 5.8 is that there is agreement between the user-groups in most companies and there are only three companies in

which the SNFM believe that there is a financial reward for budget-related performance. The statistically significant difference found in the whole sample appears to be concentrated in a few companies.

Question E5 is the only other question in this section that directly relates to Proposition 1. The responses are shown in Figure 5.9 below.

FIGURE 5.9

Responses to Question E5 by User-Group

"Do Your promotion prospects depend upon ability to achieve the budget?"

	AOCT	SNFM	FLM		
YES	9	45	32	86	(41.1%)
NO	57	26	40	123	(58.9%)
	66	71	72	209	

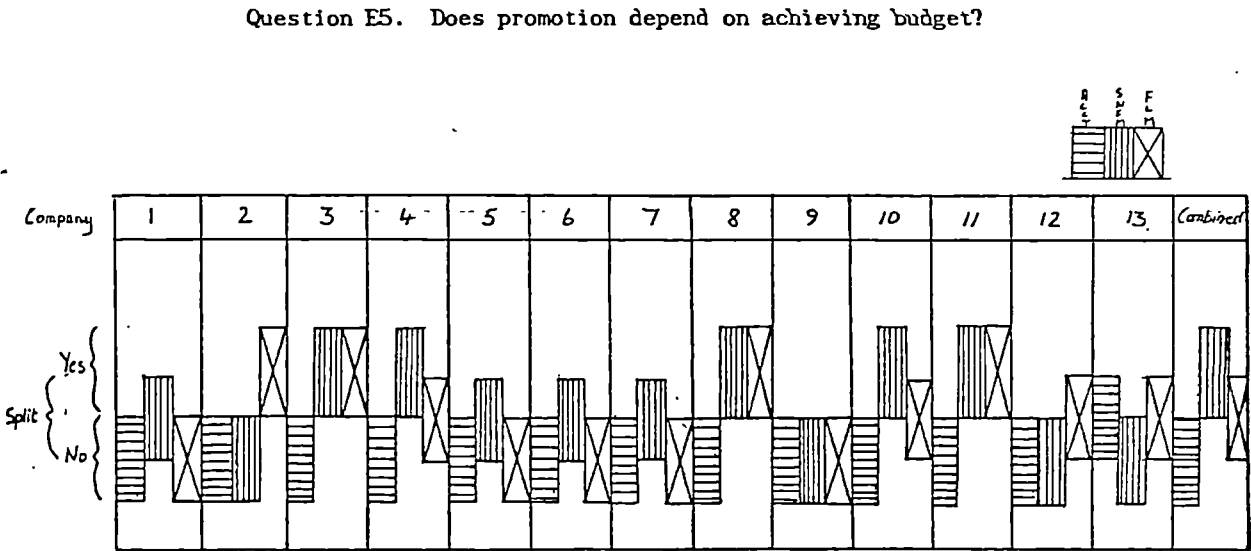
The null hypothesis that these three user-groups come from the same population can be rejected. $\chi^2 = 35.37$ which is highly significant, i.e. at a higher level than 0.5%. It is not unexpected that accountants would answer this question differently from the managers. The appraisal of accountants is likely to be based on features other than achieving the budget. With this in mind, the two groups of managers were tested to see if the null hypothesis that they come from the same population could be rejected. This hypothesis could be rejected at 2.5% significance level, indicating that there were differences between the response of senior managers and first-line managers.

Thus, in this instance the three user-groups are giving different

responses to the question of whether budget-related performance is a factor in gaining promotion. It appears that senior managers may well find some motivational content in the budget, through the indirect route of promotion prospects.

At the individual company level the situation appears to be rather confused and is shown in Figure 5.10.

FIGURE 5.10
Responses to Question E5 by Company and User-Group



The results of this figure can be summarised as:

	Yes	Split	No
ACCT	0	1	12
SNFM	5	4	4
FLM	4	4	5

From this it is clear that accountants give a clear response in all but one company, with 86% saying No'. However, the other user-groups are divided in their responses. Overall there is only one company where the three user-groups agree and only four where FLM and SNFM are in agreement. There are no features in the context or organisation of these companies available to the researcher which can account for the differences between the user-groups in different companies. It is also interesting to note that eight of the groups of managers (30%) have a split response and this may indicate that the use of budget-related performance assessment as part of the promotion process is a specific feature rather than a general one. For example, only in circumstances where meeting the budget is a satisfactory reflection of good performance, would it be used as part of the promotion appraisal.

5.3.4 Conclusions for the Hypothesis for Proposition 1

The conclusion to the hypothesis that the three user-groups will have similar perceptions of the rôle of the budget as a forecast rather than a motivational device, is based on a general assessment of the results presented in the preceding section. There is no single statistical test that is being used.

The evidence from questions C1 - C3 is that the user-groups do agree that the budget is primarily a forecast. There are some differences as to the motivational aspects of the budget. Accountants generally consider this rôle to be less important than the other groups. The budget is used as a motivational device, linked to a general financial reward or promotion in some companies. Accountants believe their promotion prospects are much less dependent on budget-related performance, and there are also differences between the two groups of managers.

There is some evidence that senior managers see more motivational features in the budget than the other groups and regard the budget as some form of target.

Overall, the hypothesis presented in section 5.3.1 is supported except for some differences over the use of the budget as a motivational target. However, the occasions where these differences occur are not such as to contradict the basic budget description as a forecast.

5.4 PROPOSITION 2 - THE BUDGET AS A CONTROL DEVICE

In section 4.1.2, proposition 2 stated that in UK companies the major rôle of the budget was as a control device through the comparison and explanation of the differences between the budget and actual results. In Chapter 4 this proposition was generally supported by the evidence from the study.

5.4.1 The Null Hypothesis for Proposition 2

Textbooks invariably give prominence to this rôle and directly or otherwise imply that this is a company-wide rôle and thus that different user-groups should not have different perceptions of the manner in which the budget is being used. The academic literature does not generally contradict this. The few instances in the literature where differences in budget rôles are examined suggest that there may be differences in the importance attached to the control aspects of the budget. In this light the following null hypothesis is adopted.

Hypothesis for proposition 2 : the three user-groups will each believe that the major rôle of the budget in their company is as a control device.

5.4.2 Questions C1 and C2 - The Purposes of the Budget

Two of the budget purposes listed in questions C1 and C2 are particularly relevant to this proposition. CONVAR is defined as "to control performance by calculating and investigating variances" and JUPERF is "to judge performance". The Kruskal-Wallis data in Figure 5.1 shows that of the combined sample there is no significant difference between the user-groups for JUPERF, but there is a difference at 5% significance level for CONVAR. The means scores in Figure 5.4 do not show one of the user-groups noticeably different for CONVAR, rather each is different from the others. Accountants give the lowest score and SNFM the highest for both of these purposes. The star-plots in Figure 5.2 show more similarity than difference for these two purposes.

For question C2 there is greater agreement between the user-groups and for the combined sample there were no significant differences for either question. For each user-group the C2 score is higher than for C1. This indicates a consensus as to the importance of the control rôle of the budget.

The individual company results confirm the pattern seen for the combined sample. In C1 there are four companies which have some differences between the user-groups for CONVAR. Company 5 is a particular case which will be discussed later, but in the remaining three companies there is no pattern to the results for which an explanation could be found. For the purpose JUPERF there is one company with a significant

difference at 10%, a result which seems to be a random event. For C2, there are three significant differences from the possible 26 and no examination of these differences has been carried out.

5.4.3 Conclusions for the Hypothesis for Proposition 2

Chapter 4 concluded that the budget does have a major control purpose in these companies. The data here indicate that there is a significant difference between the three user-groups in the responses to the question CONVAR. Interestingly, it is senior managers who are perceiving most importance for this purpose and accountants the least. For JUPERF, there is agreement between the user-groups as there is for both of these purposes in question C2. The individual companies show few instances of differences on this issue. Thus, on balance, the evidence here gives some support to the hypothesis that the three user-groups have similar perceptions on the control rôle of the budget and there is a strong similarity in their views as to how important this control rôle ought to be.

5.5 OTHER FEATURES OF THE RÔLE OF THE BUDGET

Before considering proposition 3 there are a number of features from the results to the questions in section C of the questionnaire which, while not directly relevant to the propositions, are of interest. They may help to produce a better understanding of the differences between the user-groups.

5.5.1 The Rôle of the Budget in General

5.5.1a In Figure 5.1 it can be seen that two of the most significant differences between the user-groups arise in the purposes *ITMAX* and *COMM*. Further, *ITMAX* has six individual companies where there are significant differences. The mean scores for the combined sample in Figure 5.4 show that in both instances it is the accountants who have noticeably lower scores than the groups of managers. For *ITMAX* in ten of the companies accountants give the lowest score and similarly for *COMM*, but these are not the same ten companies. This result could be interpreted as evidence that accountants have a narrower view of the budget which centres on planning and control. They give less importance to the wider, more business-oriented purposes of assisting profit-maximising and communicating.

5.5.1b In comparison with question C1, question C2 has only 60% as many significant differences for the individual companies and only two in the combined sample. This may indicate that there is a greater consensus among the user-groups as to what the rôle of the budget ought to be. It has been noted in Chapter 4 that the mean scores in C2 are greater than in C1 and thus there appears to be agreement among the user-groups that the budget should have increased importance.

5.5.2 Individual Companies

While it is not possible to examine the differences between user-groups at the individual company level in any detail, there are some features that are very clear and worthy of comment.

5.5.2a Company 5. There are a number of instances in Chapter 4 where company 5 was clearly producing responses which were different from the other companies. In the table of Kruskal-Wallis results for question C1, company 5 has six significant differences (no other company has more than three). The cause of these results is clear from an examination of the star plot for company 5 in Figure 5.2. For each of these six purposes the accountants are giving a much lower score. The conclusion from this is that accountants in company 5 are putting less emphasis on the importance of the budget, and probably more on the job-cost system which they perceive as the important control mechanism. Only for forecasting do the user-groups have agreement and the accountants rank this more highly than the other user-groups.

The Kruskal-Wallis results for question C2 do not have this array of significant differences for company 5. The star plots in Figure 5.3 still show the accountants as having lower scores than the other user-groups, but the difference between the groups is much reduced. This may indicate that the accountants believe that the budget should have a more important rôle. This is supported by the fact that the other user-groups have generally higher scores for C2 also and so the difference between the user-groups has been closed by a distinct difference in the responses of the accountants.

5.5.2b. Company 1. The other company for which there is a series of significant results is company 1 for question C2. Here there are four significant differences between the user-groups. For three of these purposes (ITMAX, COMM and REWARD) it is accountants who give noticeably lower responses and it appears that the narrower and less business oriented view of the budget, described in section 5.5.1a, is considered desirable by the accountants in company 1. There is nothing in the data

available that suggests why this result has occurred.

5.5.3 The User-Group in General

Thus far the responses of the user-groups have been examined by looking at each part of (i.e. each purpose) of questions C1 and C2. The pair-wise correlation tests look at the whole of each question, i.e. the seven purposes in questions C1 and C2 and compare the responses of the user-groups over the whole question. From these results it is possible to draw some conclusions about the differences between the user-groups. This test has been conducted on the combined sample and for each company and the results are shown in Figure 5.11.

It is possible that these tests will produce results which are not immediately compatible with those that have been considered thus far in this chapter. Up to this point, it has been noted that there have been differences between the user-groups on single parts of questions C1 and C2, whilst on other parts of the question there have been no differences. This tests looks across the whole range of the question and determines how similar the answers are between two groups.

5.5.3a. For the combined sample, in questions C1 and C2, there is a high correlation between the three user-groups. This is not unexpected as the aim of this test is to seek for any differences between user-groups at the company level and the aggregation problems would be likely to preclude any significant differences in the combined sample.

5.5.3b. In the results for question C1 it is hard to see any pattern or trend although there are some features of interest. There is a high correlation between the responses of the three user-groups in company 5,

CORRELATION COEFFICIENTS FOR QUESTIONS C1 AND C2; D1 AND D2

Figure 5.11

COMPANY	ALL	1	2	3	4	5	6	7	8	9	10	11	12	13
<u>QUESTION C1</u>														
AOCT v SNFM	.94	.91	.79	.70	.57	.85	.46	.87	.71	.81	.80	.84	.80	.47
AOCT v FLM	.97	.73	.93	.60	.77	.88	.71	.92	.94	.96	.80	.90	.77	.50
SNFM v FLM	.96	.74	.59	.82	.86	.88	.76	.93	.86	.89	.52	.79	.74	.55
CONCLUSION		F	S≠F		A≠S		A≠S		A≠S		S≠F			
<u>QUESTION C2</u>														
AOCT v SNFM	.91	.74	.83	.58	.85	.91	.47	.73	.34	.93	.87	.61	.19	.64
AOCT v FLM	.95	.34	.56	.81	-.01	.73	.81	.49	.20	.88	.89	.92	.43	.77
SNFM v FLM	.88	.34	.62	.60	-.12	.73	.71	.50	.47	.85	.86	.75	-.36	.71
CONCLUSION		F	F	S	F	F	A≠S	F	A≠F		A≠S	S		
<u>QUESTION D1</u>														
AOCT v SNFM	.96	.82	.93	.80	-.28	1.00	.96	.39	.96	.84	.99	.93	.97	.63
AOCT v FLM	.99	.89	.98	.92	.98	.97	.95	.79	.56	.88	.78	.97	.93	.19
SNFM v FLM	.99	.71	.94	.55	-.08	.97	.99	.85	.74	.88	.84	.88	.87	.80
CONCLUSION			S≠F		S		A≠S	A≠F						A≠F
<u>QUESTION D2</u>														
AOCT v SNFM	.96	.89	.51	.69	.69	.99	.91	.84	.99	.79	.93	.84	.95	.31
AOCT v FLM	.97	.84	.93	.94	.79	.93	.87	.86	.58	.94	.89	.63	.87	.59
SNFM v FLM	.99	.99	.62	.88	.86	.87	.96	.51	.63	.95	.74	.95	.98	.93
CONCLUSION		S		A≠S			S≠F	F	A≠S	S≠F	A≠F			A

KEY : A = AOCT are giving different response to other user-groups
 S = SNFM are giving different response to other user-group
 F = FLM are giving different response to other user-groups
 ≠ = Two groups are giving responses which differ from each other

even though there are significant differences between the three groups for six of the seven purposes according to the Kruskal-Wallis results. This may be explained by the fact that for five of the seven purposes AOCT have given the lowest score and FLM the highest. This can be seen on the star plot in Figure 5.2. For company 13 the correlation coefficients are lower for all three pairs than is found in the other companies. The star plot for this company shows that the user-groups vary greatly in the ordering of importance that they have given to each purpose.

5.5.3c. In the correlation coefficients for question C2 a possible pattern does emerge. In five companies the FLM are the user-group who are different from the other two and in one other company AOCT and FLM are clearly different. Too much should not be read into this result, but it may be an indicator that the first-line managers have a different view of the budget rôle in general in these six companies. The explanatory data which was collected during the company visit gives no insight into this result. There are no other general features which emerge from this test. This may indicate that differences between the user-groups will only be found on specific issues or in particular companies.

5.6 PROPOSITIONS 3a AND 3b - BUDGET PRESSURE

In Chapter 4 these two propositions were examined and the basic conclusions were:

Proposition 3a. The budget was used as a control device and there was evidence of pressure to meet the budget.

Proposition 3b. It was predicted that budget pressure would be resented and be the cause of dysfunctional behaviour, but this was not substantiated by the results.

5.6.1 The Null Hypothesis for Propositions 3a and 3b

The literature reviewed in Chapter 2 is clear that using the budget as a control device will produce pressure and that pressure beyond a certain degree will produce resentment and dysfunctional behaviour. In this study the two aspects will be examined separately. The results from Chapter 4 support proposition 3a and there is nothing in the literature reviewed in section 5.1 which suggests that the user-groups will have different attitudes towards a control-oriented budget producing pressure. Thus the following null hypothesis is advanced.

Hypothesis for Proposition 3a : the three user-groups will agree that use of the budget as a control device will produce pressure on employees.

However, the position is more complicated for proposition 3b. Firstly, proposition 3b was not supported by the results in Chapter 4. The literature reviewed in section 2.5.1 strongly supported the view that budget pressure would cause dysfunctional behaviour. The difference between the literature and the results of this study may be caused by having three distinct user-groups in the samples. There is little in the literature about accountants as budget-holders. Further, a general knowledge of business practice suggests that accountants are not likely to be controlled by the budget in the same manner as managers. Thus, they may not experience budget pressure in the same way as other

user-groups and have different attitudes towards dysfunctional behaviour. As a result, the hypothesis for proposition 3b to be examined is as below.

Hypothesis for Proposition 3b : the user-groups will have different attitudes towards the existence of dysfunctional behaviour caused by budget pressure; in particular, accountants will experience less resentment and less dysfunctional behaviour.

5.6.2 Question G1 - Budget Pressure

The questions in section G are set out in Figure 4.14 and Appendix 1. Question G1 asks "do you feel any pressure on you to meet the budget". The response to this question is shown below in Figure 5.12.

FIGURE 5.12

Responses to Question G1 by User-Group

	ACCT	SNFM	FLM		
Yes	34	60	59	153	(75%)
No	31	8	12	51	(25%)
	65	68	71	204	

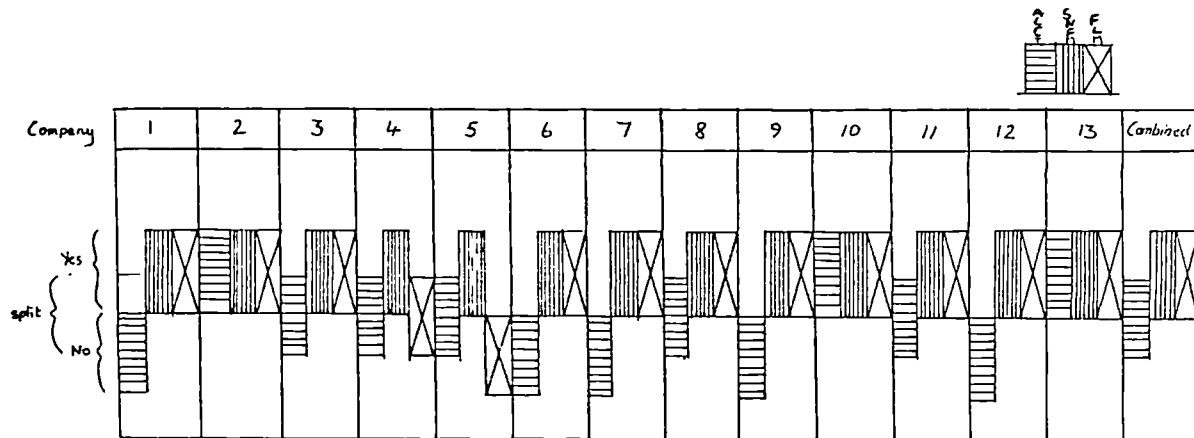
The null hypothesis that the three user-groups come from the same population can be calculated in the manner described above. This produces a result of $\chi^2 = 26.67$ which, with 2 d.f., is highly significant (i.e. at greater than 0.5% significance) and the null hypothesis is rejected. It is clear from Figure 5.12 that accountants are the primary cause of this difference and when the probability test is repeated on SNFM and FLM alone the $\chi^2 < 1$ and thus the hypothesis that these two

groups come from the same population cannot be rejected.

The responses to this question for each company can be seen in Figure 5.13 and the general picture from the combined sample is replicated in many of the individual companies. In eight companies the SNFM and FLM state that there is pressure to meet the budget while AOCT state that there is not or they give a split response. Company 5 gives a perverse response again and in three companies all the user-groups state that there is pressure to meet the budget.

FIGURE 5.13

Responses to Question G1 by Company and User-Group



5.6.3 Conclusions for Hypothesis for Proposition 3a

The senior and first-line managers give strong support for proposition 3a. This is found in the combined sample and all but one company. However, the response of the accountants is significantly different, only half of them feel budget pressure although this response is not found uniformly within the companies. In five companies accountants

clearly state that they feel no pressure and in three they state the reverse.

Thus, it is concluded that this hypothesis is not supported by the evidence as accountants do not clearly affirm proposition 3a.

5.6.4 Proposition 3b - The Consequences of Budget Pressure

For the SNFM and FLM there is clear evidence that they experience pressure to meet the budget and thus it is appropriate to examine the consequences of this pressure. The accountants have given a varied response to question G1 and thus care must be taken with the analysis of this proposition. However, only those who responded 'Yes' to question G1 have completed questions G3 and G4.

5.6.4a. Budget Resentment. A similar approach is adopted here to that in section 4.5. The issues of resentment and dysfunctional behaviour are addressed indirectly. Question G3 asks respondents for the source of budget pressure. A Kruskal-Wallis test was conducted on the combined sample and the results of this are given in Figure 5.14. No statistical tests have been conducted at the individual company level because the sample sizes of some user-groups are too small for meaningful results.

In section 4.5.1 it was noted that self-created pressure was ranked as the greatest source and that this was not in line with the prediction based on a review of the literature. It is of interest here that this same source of pressure is the cause of one of the two differences between the user-groups. The medians (and more strongly the means) indicate that accountants have given self-generated pressure less importance than the other groups.

FIGURE 5.14

Kruskal-Wallis Results for Question G3 - The Source of Budget Pressure

	AOCT	SNFM	FLM	Kruskal-Wallis Result *
Number in sample	34	59	58	
Medians for each user-group for each source of pressure				
TCM	14.0	13.0	6.0	.005
TDM	11.0	16.0	14.0	NS
AOCT	10.0	6.0	6.0	NS
IMSUP	15.0	15.0	16.0	NS
YOUSF	14.5	17.0	16.0	.005

* .005 = The three groups were significantly different at 0.5% level.

NS = There was no significant difference between the groups at less than 10% level.

The other significant difference between the user-groups occurs in their perception of pressure from TCM. Not surprisingly the FLM, who are organisationally more distant from TCM, have indicated that they experience less pressure from senior central management than the other two user-groups.

In Chapter 4 the major finding was that accountants were the least source of pressure to meet the budget and self-generated pressure was the greatest. From this it was concluded that there was not any great resentment towards the budget (see section 4.5.1). The Kruskal-Wallis results indicate that the view concerning pressure from accountants is not significantly different between the user-groups but that accountants feel that self-generated pressure is less important to them than to the

other user-groups. These results can be interpreted as implying that accountants may have a different attitude towards budget pressure as they consider other sources of pressure at least as strong as self-generated pressure. It is only external pressure that can be the source of resentment, thus accountants may develop resentment towards budget pressure while the other groups do not. The results here do not justify stating this conclusion with great confidence, but it is certainly a possible interpretation of the results.

5.6.4b. Dysfunctional Behaviour. This part of hypothesis 3b is examined primarily by using questions G4 and F3. Question G4 asks whether more or less pressure to meet the budget would help in attaining the company's major objectives. The results for the combined sample are given in Figure 5.15.

FIGURE 5.15

Responses to Question G4 by User Group

"Would more or less pressure help in obtaining company objectives"

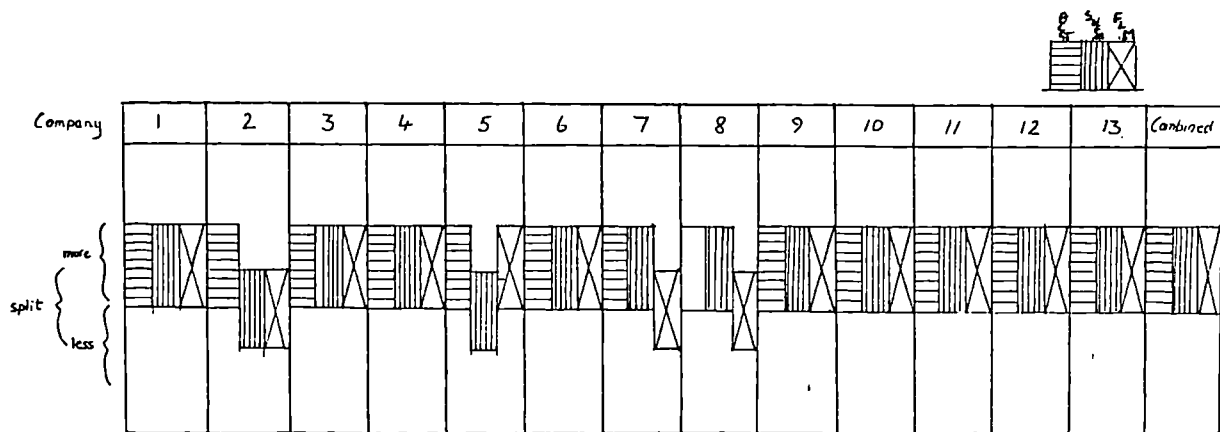
	AOCT	SNFM	FLM	
More	54	42	56	152 (85.9%)
Less	4	10	11	25 (14.1%)
	58	52	67	177

The null hypothesis that the three user-groups come from the same population has again been tested. The result is $\chi^2 = 3.915$ which is not significant at 10% and thus the null hypothesis cannot be rejected.

The question can also be examined at the company level and these results are shown in Figure 5.16.

FIGURE 5.16

Responses to Question G4 by User-Group and Company



The combined sample and nine companies give a clear result showing agreement between the user-groups. Although a general *desire for greater pressure* was contrary to the result predicted by the literature, here it is clear that this result is found in all user-groups and most companies. The result must be seen in the light of the answers to question G5 where virtually all respondents stated they had experienced constant or increased pressure in the preceding year.

Dysfunctional behaviour was also examined by question F3 which asks whether the budget hinders the improvement of performance (the questions from Section F are set out in Figure 4.20). The results for question F3 are set out in Figure 5.17.

FIGURE 5.17

Responses to Question F3 by User-Group

"Does the Budget ever hinder the improvement of performance?"

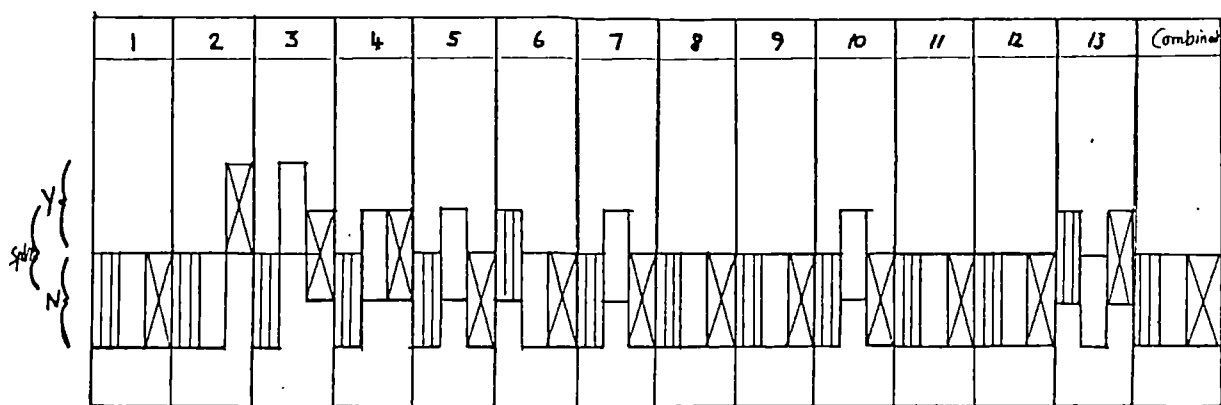
	AOCT	SNFM	FLM	
Yes	9	21	18	48 (23.4%)
No	56	47	54	157 (76.6%)
	65	68	72	205

The null hypothesis that the data for the three user-groups in Figure 5.17 came from the same population was tested in the same manner as before. This produced $\chi^2 = 6.21$ which is significant at the 5% level and so the null hypothesis is rejected. The accountants are the source of this difference as only 14% of this user-group state that the budget hinders their performance whereas for senior managers this figure is one third and for first-line managers it is one quarter.

The results for this question at the company level are shown in Figure 5.18.

FIGURE 5.18

Responses to Question F3 by User-Group and Company



The results for the combined sample, i.e. that all user-groups do not see the budget as a hindrance to performance, are generally repeated at the company level. Adopting the same classification method as before for this figure, the combined sample and five companies show the three user-groups agreed that the budget does not hinder performance. In only two of thirty-nine instances is a user-group classified as 'Yes', while nine have a split response.

Thus the results for question F3 indicate that in general the three user-groups are not experiencing any hindrance from the budget. However, there is a difference between the user-groups in that the minority within each user-group who do feel that the budget hinders performance is significantly smaller among accountants.

5.6.5 Conclusions for Hypothesis for Proposition 3b

Proposition 3b was in two parts relating to resentment of the budget and dysfunctional behaviour, both consequent upon excess budget pressure. The hypothesis advanced was that accountants would have a different reaction to the other user-groups and that this might be an explanation of the unusual results found in Chapter 4.

The results from question G3 indicate that accountants feel self-generated pressure to be less important than the other user groups and thus may be more likely to experience resentment as pressure is being exerted by external elements. In question G4 there was almost no difference in the responses of the three user-groups. Finally, question F3 shows that in general the user-groups are giving a similar response but there is evidence that accountants are answering 'No' to the question in significantly greater numbers.

This hypothesis does not have a straightforward conclusion. In general the evidence does not support any major difference between the user-groups and the hypothesis is not supported. However, there are some aspects where accountants are giving a different response, certainly enough to add a qualification to this rejection of the hypothesis. It appears that the accountants, more than the managers, are responsible for this unusual result in which budget pressure is neither resented nor the cause of dysfunctional behaviour. But it should also be noted that the self-generated source of budget pressure is found most strongly in the managers who are typically described in the literature as most likely to resent budget pressure.

5.7 PROPOSITION 4 - PARTICIPATION IN THE BUDGET PROCESS

Proposition 4 stated that the level of participation in the budget-setting process was not great and that employees desire a greater degree of participation. The findings from Chapter 4 supported this proposition.

5.7.1 The Null Hypothesis for Proposition 4

There is little in the literature which directly discusses the different user-groups of interest in this study. The literature is generally framed in terms of managers participating at the discretion of senior management and accountants. The literature reviewed in section 5.1 does not give any further indication of different reactions to participation by the user-groups. There is a general organisational principle put forward by many (including Mintzberg (1979) and Bruns and

Waterhouse (1975)) that a company will be as centralised as possible. If this is applied in the context of budgeting, one would expect low levels of participation and little desire from accountants for greater participation. A similar conclusion would result from an analysis of organisational power. If accountants have a major rôle in setting the budget, they will probably consider that this gives them a certain amount of organisational power and influence and thus they may not wish to share this with other groups.

From the above comments the following null hypothesis is advanced. It is not considered that the literature fully supports this hypothesis. Rather, that it is a satisfactory working hypothesis for this investigation which has some basis within the literature.

Hypothesis for Proposition 4 : the user-groups will have similar attitudes towards the amount of participation currently experienced but will have different attitudes towards greater participation in the budget-setting process; in particular, accountants will desire less participation and greater influence in the budget-setting process for themselves.

5.7.2 Question D1 - The Amount of Participation

Question D1, set out fully in Figure 4.22, investigates the degree of participation by asking how much influence various groups have in the setting of the budget. The Kruskal-Wallis test results are shown in Figure 5.19 and give a very clear answer for the first part of the hypothesis. For the combined sample there are no significant differences between the user-groups and at the level of the individual company there is only one significant difference at the 10% level (much less

ANALYSIS OF KRUSKAL-WALLIS TESTS ON ORIGINAL DATA

Figure 5.19

Question D1 - Who Sets the Budget?

Company Group	Combined	1	2	3	4	5	6	7	8	9	10	11	12	13
TCM	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDM	-	-	-	-	-	N/A	-	-	-	-	-	-	-	-
OTHP	-	-	-	-	10	-	-	-	-	-	-	-	-	-
ACCT	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Question D2 - Who Ought to Set the Budget?

Company Group	Combined	1	2	3	4	5	6	7	8	9	10	11	12	13
TCM	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDM	-	-	10	-	-	N/A	-	-	-	-	-	-	-	-
OTHP	-	-	-	-	-	-	-	10	-	-	-	-	-	-
ACCT	10	-	-	-	-	10	10	-	-	-	-	-	-	-

- 10 = A significant difference exists between the three groups at a 10% level of significance.
 5 = A significant difference exists between the three groups at a 5% level of significance.
 1 = A significant difference exists between the three groups at a 1% level of significance.

than is likely as a result of random fluctuations). The mean responses for each user-group for each part of the question are shown in Figure 5.20 and confirm the high level of agreement.

FIGURE 5.20

Mean Responses of the User-Groups to Questions D1 and D2

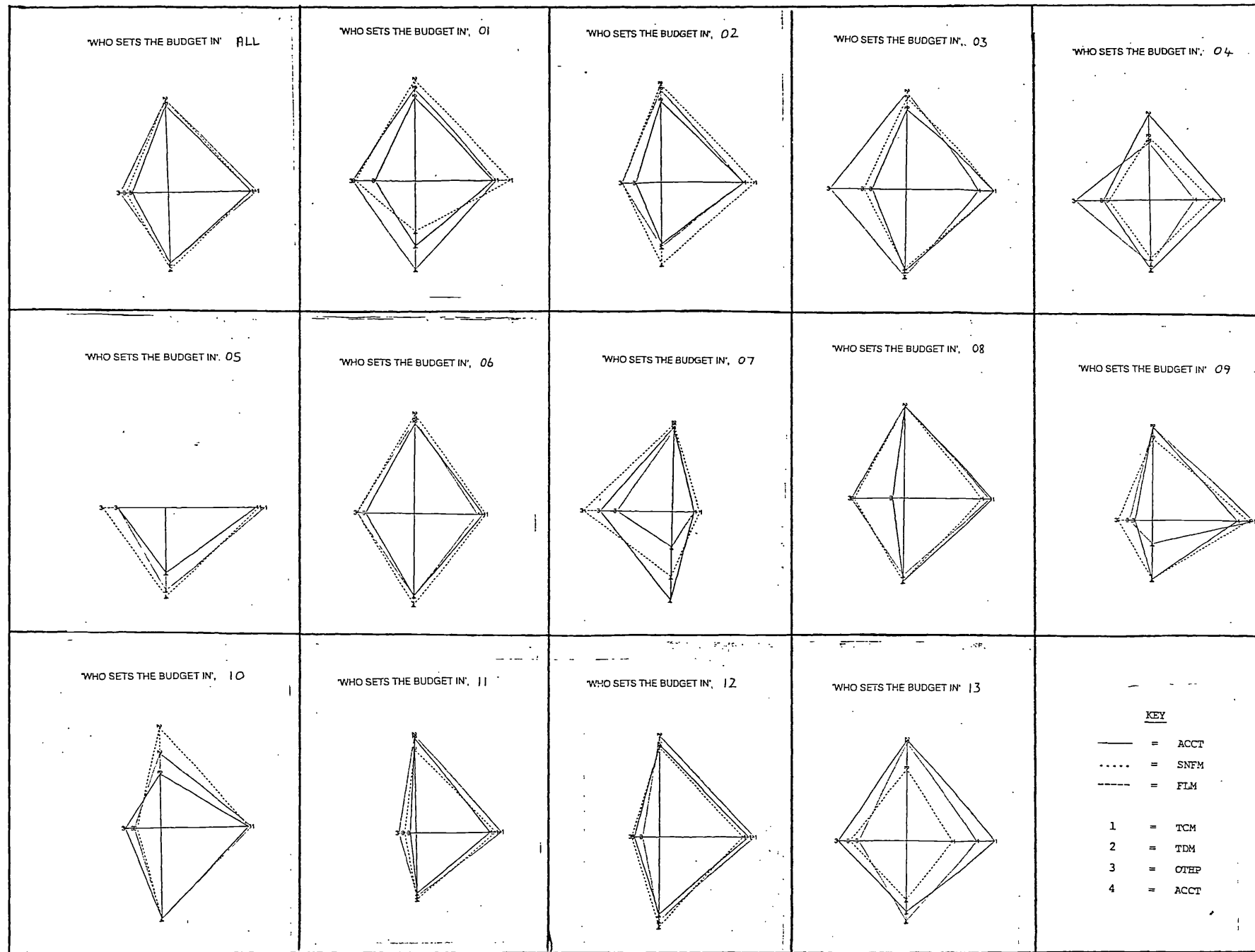
	Budget Setting Group	MEAN SCORES			
		Combined	AOCT	SNFM	FLM
Question D1	TCM	13.15	12.94	13.11	13.38
	TDM	14.16	14.39	14.72	14.70
	OTHP	7.67	6.86	8.08	8.00
	AOCT	11.80	11.73	11.45	12.21
Question D2	TCM	13.01	13.18	12.76	13.10
	TDM	15.49	15.45	15.38	15.63
	OTHP	10.30	9.91	10.30	10.66
	AOCT	11.79	12.39	10.85	12.16

The star plots in Figure 5.21 show the similarity in the combined sample very clearly. There is generally a much higher degree of agreement among the user-groups than was evident on the star plots for questions C1 and C2. Companies 1, 4, 7 and 13 show slightly less agreement than the others but there is neither sufficient information nor differences to enable any worthwhile further investigations.

The results of the pair-wise correlation over the whole of question D1 are shown in Figure 5.11. The major feature is the high level of these correlation coefficients which adds further to the evidence above. At the level of the individual companies, only company 4 has distinctly different results and this can be seen in the star plot.

Figure 5.21

Star Plots For Question D1



5.7.3 Question D2 - The Desired Amount of Participation

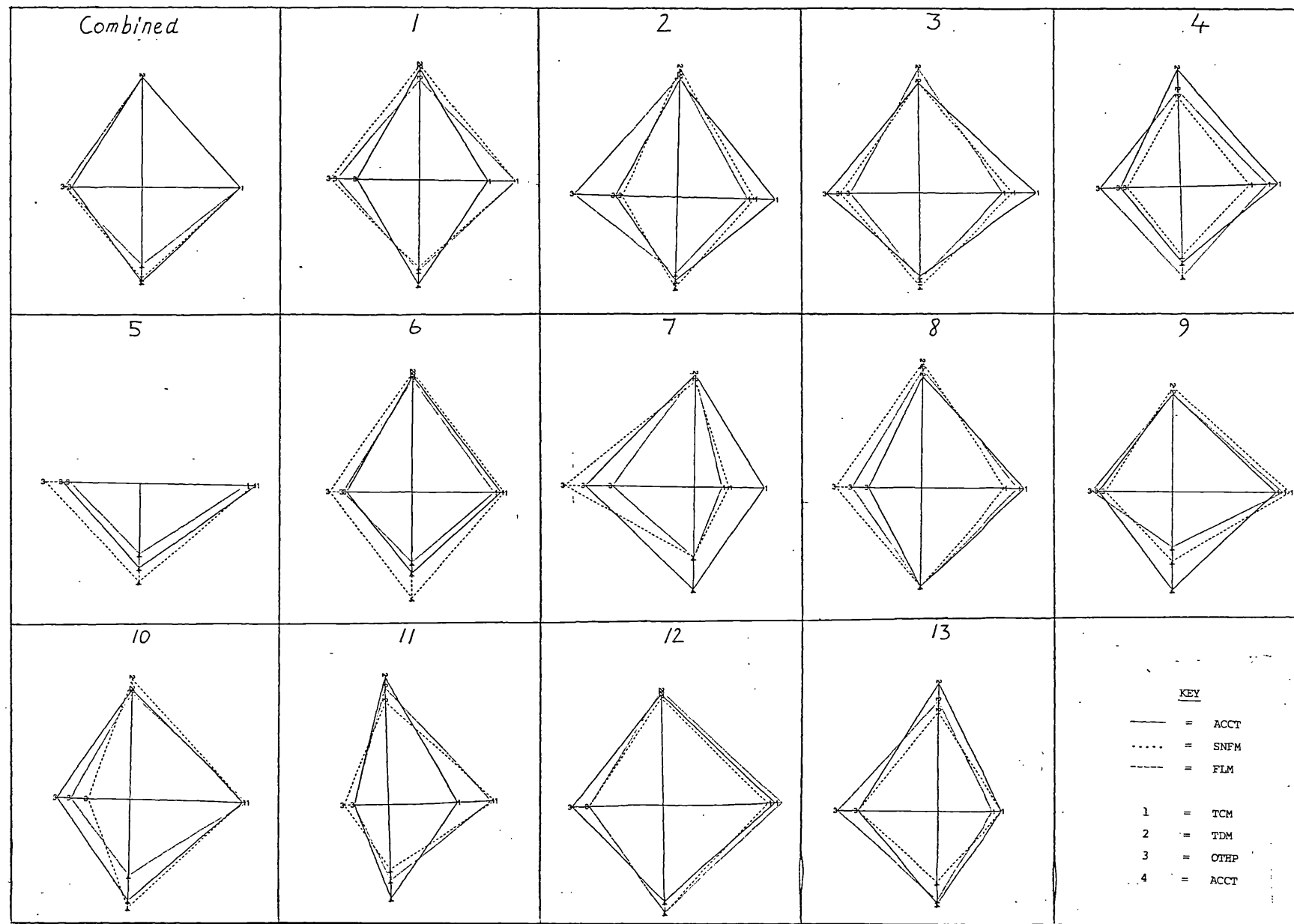
Question D2 asks how much influence each of the potential budget setting groups *ought to have*. This gives an indication of the desired degree of participation and enables the second part of the hypothesis to be considered. The lower part of Figure 5.19 shows the Kruskal-Wallis result for question D2 and as for question D1 there is a considerable degree of agreement. For the combined sample the only significant difference between the user-groups arises over how much influence AOCT ought to have. The table of mean scores in Figure 5.20 shows that the probable cause of this difference is the senior managers group, who believe accountants should have less influence in drawing up the budget. This is also the cause of the significant difference in company 5 but not for company 6, where the FLM desire a much greater influence for the accountants than the other user-groups.

The major feature of these results for question D2 is the similarity between the user-groups. The star plots in Figure 5.22 show the features already mentioned and there are only a few companies for which there are noticeable differences; particularly companies 2, 6, 7 and 11.

The correlation coefficients in Figure 5.11 show very high levels for the combined sample. There is a little more diversity among the individual companies for D2 than was evident for D1, but the overall impression is still of a high degree of agreement between the groups.

Figure 5.22

Star Plots For Question D2



5.7.4 Conclusion for Hypothesis for Proposition 4

The hypothesis stated firstly that the three user-groups will have a similar view on the amount of participation currently experienced. The results above substantiate this hypothesis clearly.

The second part of the hypothesis states that there will be differences between the user-groups as to increased participation, particularly that accountants will desire less. The major conclusion is again that the user-groups are not significantly different in this respect. Section 4.6.4 showed that there is a general desire in these companies for increased participation. The accountants are not significantly different from the other user-groups and in fact they appear to be slightly more in favour of increased participation. There is evidence for this in the table of mean responses, where the increase in scores between D1 and D2 for OTHP is 44% for accountants whereas the other user-groups are 28% and 33%.

In conclusion, the major part of the hypothesis for proposition 4 which states that accountants will want less participation than the other groups is contradicted by these results.

5.8 CONCLUSIONS FOR CHAPTER 5

At the outset of this Chapter it was stated that the investigation was, at least partially, of an exploratory nature. The conclusions would probably be tentative and may often indicate areas for further research rather than provide definitive answers to the issues being investigated.

This has been the case, although there are also some results which are clear and may be of interest to practitioners as much as to researchers.

The major conclusions from this Chapter, with some brief comments, are summarised below.

5.8.1 Specific conclusions

Proposition 1. There is general agreement among the user-groups that the budget is primarily intended as a forecast of future expected performance. The senior managers would prefer this forecast rôle to have less importance. There is general agreement that the budget does not have a target or motivational element, but this is not as clearly expressed as for the forecast rôle. A minority of senior managers indicated that there were budget-related incentives, particularly via promotion prospects, which did add a target or motivational element to the budget.

Proposition 2. The general conclusion was that the three user-groups agree that the budget in their company is used as a control device through the calculation and investigation of budget variances. The senior managers gave more importance to this rôle and accountants less. The academic and text-book literature often portrays accountants as taking the lead in this area of budgetary control, but the results here show the reverse. It is possible that accountants have a better understanding of the weaknesses of budgetary control systems and thus put less emphasis on their importance.

General rôle of the budget. Accountants give less importance to the general business oriented rôles for the budget of IIMAX and COMM. This

is perhaps a result which could be predicted following a reading of popular management accounting text-books which pay little attention to business oriented issues.

From the comments above there is a picture of the SNFM group who want the budget to have a decreased forecasting rôle, an increased control rôle, and to maintain the high level of importance given to the business oriented purposes of the budget. This group also sees a greater motivational rôle for the budget. These differences are not great but amount to a difference in emphasis which can be seen in the responses of the senior non-financial managers.

The first-line managers in six of the companies also have a different view of how the budget should be used. It is not possible to determine the differences that this group is seeking and they could well be company specific.

Proposition 3a. The two groups of managers give strong support to the proposition that pressure will result from use of the budget as a control device. Only half the accountants have this view.

Proposition 3b. The general result from Chapter 4 showed that the greatest source of pressure was self-generated and thus there was little evidence of resentment of the budget. This result was found for the two groups of managers, but accountants felt this self-generated pressure had only the same importance as some of the external sources of pressure. This may result in accountants who feel pressure to meet the budget (only half in this study) may also feel the resentment predicted by the literature.

In general the user-groups agree that budget pressure does not produce dysfunctional behaviour. It was predicted that only accountants would produce this result, and that this might be the cause of the unexpected result in Chapter 4, but this is not the case and none of the user-groups report a relationship between budget pressure and dysfunctional behaviour.

Proposition 4. The existence of only limited participation and a general desire for greater participation were found in all user-groups. Again it was hypothesised that accountants, for reasons of control and power, would want less participation, but the results show them as the most keen for greater participation.

5.8.2 General Conclusions

The results and conclusions from this chapter have been presented above in detail, and from these a general conclusion can be drawn. In a number of important aspects these results do not conform with the general textbook picture of budgeting procedures and attitudes.

This overall picture can be seen in the following specific results:

senior management gave more importance to control than forecasting and planning;

accountants were more keen on increased participation than managers;

budget pressure was not perceived as a major problem, in fact increased pressure would be considered beneficial;

pressure was internally generated rather than externally imposed, particularly for the managers.

CHAPTER SIX

THE RÔLES OF THE BUDGET - WIDER PERSPECTIVES

6.1 INTRODUCTION

Chapter two of this thesis comprised a review of the 'traditional' literature on budgeting. This included the main issues that have been discussed in accounting journals and textbooks in the last twenty-five years or so. This literature usually views the budget as an accounting phenomenon; it has a multi-purpose rôle concerned with matters such as planning, communication, motivation and control. It is unusual to find specific organisational matters discussed, although there are exceptions to this generalisation.

To a limited extent in chapter two and more so in chapters four and five, some aspects of the organisation's context have been discussed. In particular, in the search for explanatory variables, a simple contingency approach was adopted. The primary objective of this chapter is to take a wider view of budgeting than has been possible in the preceding chapters. This wider perspective will be gained by standing back from the 'traditional' view of budgeting and examining the literature that pertains to organisations to see what implications for the rôle of the budget can be found.

In chapter four it has been concluded that there are differences in the role of the budget between companies. Chapter five has shown that there are also differences in the perceptions of the rôle of the budget between three of the user-groups. The data available from the study

were not adequate for many of these differences to be fully explained. It is the view of the researcher that one of the possible explanations for these differences is to be found in the rôles that the budget plays in different organisations. Some of these rôles have not been mentioned in the the review of the literature to this point while others have only been briefly discussed.

In this chapter a number of paradigms will be briefly reviewed. The review will have the specific objective of seeking the implications of these paradigms for the rôle and purpose of the budget in an organisation. It is not intended that this review should be exhaustive. Rather, four paradigms have been selected which have been influential in the literature on organisations and from which some accounting implications have already been elucidated.

Following the review of these paradigms a comparison will be made of the implications that can be drawn from each. One of the main objectives of the comparison will be to determine whether these different paradigms produce similar or complementary conclusions.

The four paradigms to be examined are:

1. Contingency Theory
2. Organisational Power
3. Markets and Hierarchies
4. Agency Theory

A review of any of these could easily fill a complete chapter, if not a whole thesis. It is not the intended that this chapter should include a comprehensive review of these four paradigms. Rather, that the main features of each approach should be outlined and analysed by

considering a small number of important contributions to the literature. These books or papers are well-known and often contain a review of the paradigm in question.

Occasional reference will be made to the literature reviewed in chapter 2 and to the results from chapters 4 and 5. Further comments relating the reviews in this chapter to the earlier results will be made in the concluding sections of this chapter and in chapter 7

6.2 CONTINGENCY THEORY APPROACH

The contingency theory paradigm (hereafter referred to as 'CT') will be considered by using two well-known and influential works; first, the paper by Bruns and Waterhouse (1975), 'Budgetary Control and Organisation Structure', and second, Henry Mintzberg's book 'The Structuring of Organisations'.

CT is often quite narrowly defined; for example Waterhouse and Tiessen (1978) gave the following definition:

"Contingency Theory essentially states that efficient organisation structures vary with organisational contextual factors such as technology and environment." p.66

In this section, and particularly in the review of Mintzberg, a broader view will be taken in which a wider range of contextual factors will be considered.

6.2.1 Bruns and Waterhouse

The paper by Bruns and Waterhouse (hereafter B&W) makes a natural bridge between the 'traditional' approach to budgeting and CT under

consideration in this section. This is because budgeting is directly considered in the paper and publication was in a leading accounting journal. B&W also claim to be among the first to focus "specifically on the relationship between formal properties of organisational structure and budgetary control". Near the beginning of the paper a summary of their conclusions is given:

"These findings lead to the conclusion that there must be alternative organisational control strategies in different kinds of organisations, and that prescriptions about how budgets should be used in organisational control should be written with care." p 178

This quotation indicates one the most important conclusions which can be drawn from CT for the purposes of this chapter, i.e. that a full understanding of the function of the budget for organisational control cannot be obtained without some reference to the organisation's context.

B&W distinguish two forms of organisation structure: centralised and decentralised but structured. Although budgetary control may be used in either of these structures, B&W suggest that the decentralised and structured organisations operating in a stable and predictable environment are particularly "amenable to the use of budgets, and budgets further the structure activities". In centralised organisations "interpersonal relationships replace structured activities as primary means for maintaining control", so the budget and other administrative controls will have a secondary rôle.

The results of their study indicated that technologically sophisticated organisations were larger and more structured. Perhaps surprisingly, in large, structured organisations managers felt they had more control, that they had more discretion on how to achieve financial

results, that a greater degree of participation was perceived and they were satisfied with budget-related activities. B&W state that this is consistent with the idea that highly structured organisations are associated with routine, standardised activities.

Different effects were seen in centralised organisations, where managers experienced superior-initiated pressure, they saw budgets as being generally less useful, but they appeared to be satisfied by the use of budgets by their superiors.

The conclusion that can be drawn from the B&W study is that the results show a relationship between contextual variables (size and technology) and the rôle of the budget. This result is indirect as the contextual variables influence the organisation's structure, and the structure in turn affects the manner in which the budget is used and perceived. From this study it is apparent that the CT framework may have a good deal to offer in the understanding of the use of budgetary control and the rôle of the budget. A more extensive examination of the CT approach to organisations is presented in the following section.

6.2.2 Henry Mintzberg - "The Structuring of Organisations"

Mintzberg(1979) states in the preface that he is attempting to produce a synthesis from a large amount of published material on organisation structure. Mintzberg takes a broad view of CT, incorporating some variables that many other writers overlook and developing a more detailed analysis of organisation structures.

6.2.2a Parts of the Organisation

Mintzberg defines five basic parts of an organisation, namely:

Operating Core - where the basic work of the organisation takes place, where inputs are turned into outputs.

Strategic Apex - consists of senior management and their own personal staff who are charged with ensuring that the organisation serves its mission in an effective manner

Middle Line - who are the chain of command or organisation hierarchy that join the strategic apex to the operating core.

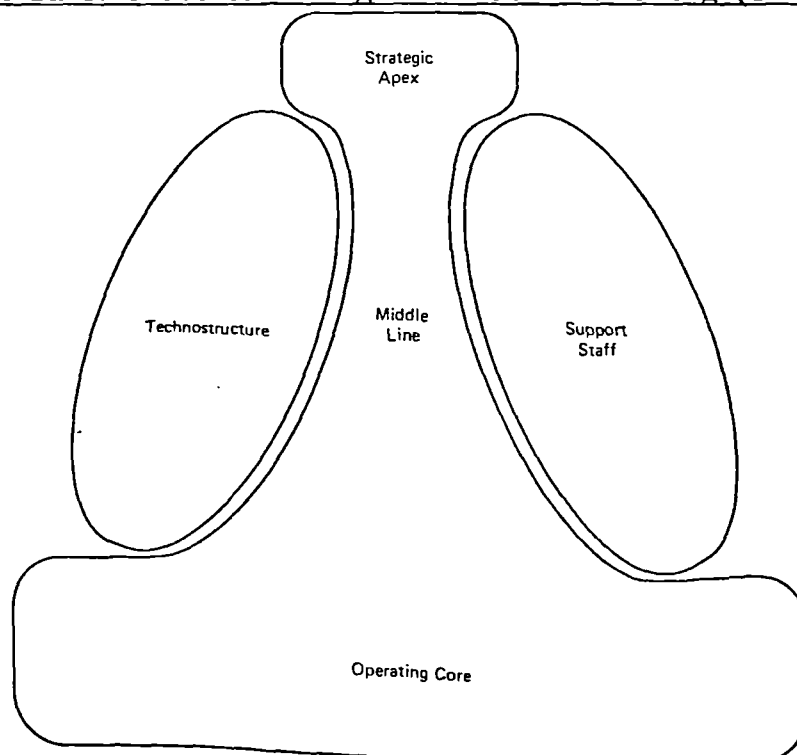
Technostructure - comprises the analysts who serve the organisation by affecting the work of others. These control analysts primarily attempt to effect standardisation in the organisation, and include: work study analysts, budget accountants, strategic planners.

Support Staff - includes a large number of specialised units that exist to provide support for the organisation outside the operating work flow. Units within this part of the organisation include: legal department, industrial relations, research and development, cafeteria.

These parts of the organisation are represented in the diagram shown in figure 6.1.

FIGURE 6.1

The Five Basic Parts of an Organisation - Mintzberg (1979) p. 20



As will be seen later, these different parts of the organisation have differing degrees of importance and different relative sizes depending the circumstances in which the organisation is found.

6.2.2b *Design Parameters*

Mintzberg then considers a number of 'design parameters', some of which will now be defined in Mintzberg's terms.

Horizontal Job Specification - is the predominant form of division of labour and involves separating work into its component parts and usually allocating different parts to different groups of workers.

Vertical Job Specialisation - separates the performance of work from its administration. The worker only performs the activity and has no influence over how or why it is done.

Bureaucratic structure - one where behaviour is predetermined or predictable, in effect, standardised.

Organic structure - one where there is an absence of standardisation.

Behaviour Formalisation - is the design parameter by which the work processes of the organisation are standardised. This may done in three ways: formalisation by job, formalisation by work flow, and formalisation by rules.

Vertical Decentralisation - is concerned with the delegation of power down the chain of authority, from the strategic apex to the middle line. The focus is on formal power rather than the informal power that arises from advising and executing

Horizontal Decentralisation - This is the transfer of power from managers to non-managers, from line managers to staff managers, analysts, specialists etc.

6.2.2c The Contingency Factors

Mintzberg states in part III of the book that:

" Contemporary research...has uncovered a set of what are called situational or contingency factors, organisational states or conditions that are associated with the use of certain design parameters" p 215

These contingency factors will now be stated and the main hypotheses that Mintzberg advanced from the literature will be outlined.

Age and Size. The older and larger the organisation, the more formalised its behaviour; structure reflects the age of founding of the industry; the larger the organisation the more elaborate and specialised its structure and the larger the organisation the larger the size of its average unit.

The Technical System. The more regulating the technical system, the more formalised the operating work and the more bureaucratic the structure of the operating core. The more sophisticated the technical system, the more elaborate the administrative structure. Thirdly , the automation of the operating core transforms a bureaucratic administrative structure into an organic one.

Environment. The more dynamic the environment, the more organic the structure; the more complex the environment, the more decentralised the structure. The more diversified the organisation's markets, the greater the propensity to split into market based units, and finally, extreme hostility in its environment drives any organisation to centralise its structure temporarily.

Power. The greater the external control of the organisation, the more centralised and formalised its structure. The power needs of the members tend to generate structures which are excessively central-

ised. Fashion favours the structure of the day, sometimes even when inappropriate.

6.2.2d Structural Configurations

It is Mintzberg's contention that the various features that have been outlined above (and discussed in detail in his book) fall into natural groupings or configurations. His five structural configurations, each representing a commonly found organisation structure, are presented and these will now be briefly discussed. After presenting the essential features of each configuration, the rôle of the budget will be considered. Having viewed the five structures separately, it will then be possible to consider the differences and similarities in the rôles that the budget is playing.

At the beginning of each section the key features of that structural configuration will be summarised.

1. The Simple Structure

Prime coordinating mechanism	Direct supervision
Key part of organisation	Strategic apex
Main design parameters	Centralisation, Organic structure
Contingency factors	Young, Small non-sophisticated technical system, Dynamic environment, Possibly extreme hostility or strong power needs of top manager, Not fashionable

In the simple structure control is by direct supervision in an organisation which is either very young or experiencing a dynamic or very hostile environment. A similar organisation can result from highly autocratic or charismatic leadership.

Comment Planning is extremely difficult, and communication is direct and informal. It can be concluded that in this structural configuration there is almost no rôle for the budget as a control device, and only a limited rôle for the other uses of the budget.

2. Machine Bureaucracy

Prime coordinating mechanism:	Standardisation of work processes
Key part of organisation:	Technostructure
Main design parameters:	Behaviour formalisation, Vertical and horizontal job specialisation Usually functional grouping, Large operating unit size, Vertical centralisation and limited horizontal decentralisation, Action planning
Contingency factors:	Old, large, regulating, non-technical system, Simple, stable environment, External control Not fashionable

The machine bureaucracy is characterised by operating work which is simple, routine and standardised. It will usually be large and the operating core will be cut off from its environment. The key part of the organisation is the technostructure as it is the technological process which is the heart of the organisation, The middle line will be large and communication will be formal. Formal power lies in the strategic apex but a good deal of informal power is within the technostructure as their expertise is vital. These organisations are usually large, inflexible and the best are very efficient within a narrow band of activities.

Comment It is possible to conclude from this description that the budget will have a number of potential rôles in a machine bureaucracy. Planning is both necessary and feasible, although it is likely to be kept at a high level within the hierarchy. Communication from the

strategic apex to the first line managers through the large middle line is formal and the budget is known to be an effective communication device in these circumstances. Thus the budget may have a planning and communication rôle.

Control is the other major rôle which will be considered. It would be possible to use the budget as a major control device in principle. Accurate budgets could be drawn up as the operating core is sealed off from most outside influences and the environment is relatively stable and predictable. However, the budget is unlikely to be a major instrument of control as there is another mechanism which is more effective, viz the operating process itself. The process is stable and predictable thus control is likely to be exercised by means of physical quantities and tests for quality. It is quite probable that budgets will have a control rôle outside the operating core, for example in the support areas.

To summarise the above comments, it is likely that in a machine bureaucracy the budget will have a high level planning rôle, it may have a communication rôle and also a rôle in the control of areas outside the operating core. Thus individuals from different parts of the organisation could have very different perceptions of the rôle and importance of the budget. For example, a middle manager in the operating core may have little or no meaningful contact with the budget while a departmental head in a support area may feel the budget is the major means by which his performance is controlled.

3. The Professional Bureaucracy

Prime coordinating mechanism	Standardisation of skills
Key part of the organisation	Operating core
Main design parameters	Training, Horizontal job specialisation, Vertical and Horizontal decentralisation
Contingency factors	Complex, stable environment, Nonregulating, nonsophisticated technical system, Fashionable

Examples of a professional bureaucracy include, universities, hospitals, accounting firms, solicitors and craft production. The key part of the firm is the operating core where professionally qualified or skilled individuals carry out their work with little direct supervision. The individual has considerable control over his own work, works independently of his colleagues and closely with the clients he serves. In these circumstances, and with a complex but stable environment, control and coordination is by standardisation of skills. This standardisation is achieved by means of training and indoctrination. Skills may take many years to learn and the organisation may expend considerable resources on its indoctrination programme with the intention of building a strong organisation culture. Often there are external standards which must be met but the organisation will have to ensure that they are complied with. An example of this is the internal manuals produced by accounting firms for their staff which comply with the external requirements of the profession and also provide a framework of control for the individual actions of their members.

Comment The implications for the rôle of the budget can now be examined. As work is not programmable, is not directly repetitive, and is carried out independently by professionals, control of performance by

means of the budget does not seem to be a likely or efficient practice. The actual work undertaken cannot be easily encapsulated in financial terms; at best a budget of inputs could be prepared for certain activities. Professional bureaucracies will usually have a small technocracy (all the operating staff have considerable technical training) but there may be a large support staff, for example in a hospital, the staff for cleaning, catering, portering etc is a large proportion of the total staff. In the support areas a control budget may be effective.

The budget may have a rôle in long-term planning and in the shorter term management of resources for large units i.e. at a high level in the organisation and thus not in any great detail. There is also a rôle for the budget in the support staff areas where the work is simpler and more programmable, but there are other control techniques which may be more appropriate, for example direct supervision. In the public sector, in particular, the budget may be a constraint or a maximum amount of inputs which are available for a given time period.

It could be argued that any attempt to impose a control budget on the operating staff of a professional bureaucracy would be likely to have serious detrimental consequences for the quality of work. The nature of the work, its diversity and the need to exercise professional judgement, indicates that control and communication by means of an operating budget are not likely to be features of this form of organisation, except in areas outside the operating core.

4. The Divisionalised Form

Prime coordinating mechanism	Standardisation of output
Key part of organisation	Middle line
Main design parameters	Market grouping, Performance control system, Limited vertical decentralisation
Contingency factors	Diversified markets (particularly products or services), Old, Large, Power needs of middle line Fashionable

Mintzberg does not see the divisionalised form as a pure structure, but as one structure superimposed upon others. The essence is a central headquarters with quasi-autonomous, probably market-based units. A large range of products may be produced. The middle line is the key to this structure as these managers have considerable responsibility to run their own divisions. The production process and environment allow standardisation of output which in turn allows for a performance control system to be one of the main design parameters.

There is also considerable emphasis on training of divisional management to produce standardisation of skills and there is an important element of direct supervision of the senior divisional management by central management. Theoretically, central management is concerned with strategic decisions while the divisional management is given the responsibility for operational matters; there will be a tendency for each to attempt to become involved in the areas of the other.

The needs of central management to keep control over autonomous divisional management, in a reasonably stable environment where standardisation of output is possible, has led to the use of performance

control systems.

Comment One of the most common performance control systems is the budgeting system. Thus in the divisionalised form it is common to find the budget occupying an important position. Agreement between central and divisional management at the outset of the budget is a vital form of *ex ante* control and comparison between actual results and budget forms the basis of *ex post* control.

This form of budget based control is only possible in the relatively stable and predictable environment which is necessary for the basic divisionalised form to exist. Where this environment is not found, either some hybrid version of the divisionalised form will develop or one of the other structural forms will be appropriate. It is also important to note that budgetary control is not necessarily used within the divisions. There will be a tendency to use within the divisions the same performance appraisal system as is being used for the division as a whole; the aim would be to produce a 'nesting' of objectives and performance measures. However, there will be circumstances where this is not appropriate due to the nature of the production process, the market or the environment generally. Thus it is not possible to state that divisionalised organisations will necessarily use budgets as a major control device in all divisions.

Other rôles for the budget are implicit. Forecasting and planning are viable in this environment and it is highly likely that central management would require this from divisions as an input to their own planning procedures. Communication is possible via the budgeting process and likely to be used. For example, including activities in budgets is one method of communicating the divisions intentions to

5. The Adhocracy

Prime coordinating mechanism	Mutual adjustment
Key part of organisation	Support staff (in the administrative adhocracy) plus the operating core in the operating adhocracy
Main design parameters	Liaison devices, Organic structure, Selective decentralisation, Horizontal job specialisation, Training, Functional and market grouping concurrently
Contingency factors	Complex and dynamic (sometimes disparate) environment, Young (especially operating adhocracy), Sophisticated and often automated technical system (in the administrative adhocracy), Fashionable

Adhocracies are highly organic organisations where there is usually a sophisticated technical system and a high degree of innovation results in little or no standardisation. Examples of such include: newspapers, research laboratories, N.A.S.A., integrated oil companies. These organisations show a large amount of horizontal job specialisation, there are often project groups or teams, matrix structures are sometimes seen and managers abound.

There are two basic forms in which this structure can exist:

a) *Operating adhocracy*. This form of the organisation is highly innovative; it exists to solve problems directly on behalf of clients. The administrative and operating work blend into a single effort. There is a tendency for this structure to develop into another, usually a professional bureaucracy, and thus most of these organisations are young.

b) *Administrative adhocracy*. This organisation structure

exists to solve problems for its own benefit. The administrative and operating aspects of work are kept separate. The operating core may be truncated; in some organisations this may be as a result of automation, whereas in others sub-contracting may have a similar effect.

Adhocracies are considered by Mintzberg to be much in fashion at the present and possibly to be the structural form of the future because of their ability to adapt and cope with rapid technological change. However it is clear that adhocracies are not efficient at performing repetitive tasks, and with their complex and informal structures may not be able to grow large without considerable problems of coordination and integration.

Comment It can be concluded that there is almost no rôle for the budget as a control device in this form of organisation. The environment is too dynamic and unpredictable, the structure is informal and overlapping, and the work is not programmable. There may be a limited rôle for high level budgets to assist in the planning process. In the short term, budgets may be used as a means to allocate resources and thus, they would be a form of constraint.

6.2.3 Conclusions

CT, particularly in the broader form advocated by Mintzberg, states that the structure of an organisation will be dependent on a number of contingent or contextual variables. Mintzberg analyses these variables and their inter-relationship with the parts of the organisation and various design parameters. The five structural forms that he establishes are not exhaustive and he discusses at some length the way in which these five forms are tendencies and organisations are often

being pulled in the direction of more than one of them by conflicting features of their environment, technology etc.

The conclusion drawn from the researcher's comments above is that these different organisational forms will produce different rôles for the budget to play. The control aspect will be examined first. In some organisational forms (e.g. the simple structure and the adhocracy) there is almost no control role for the budget. Whereas in the divisional form, where performance control systems play a vital rôle, the budget may be an important control device. However, even in the divisionalised form there will be many instances where the budget does not play a vital rôle within the division even if it does have considerable importance in the relationship between the central and divisional management.

The planning and forecasting rôle for the budget has more general importance as this will be relevant, to some degree, even when control is not in appropriate objective. In the adhocracy and professional bureaucracy in particular, the budget may have a rôle in resource allocation. This is especially common when outputs are difficult to measure but inputs can be quantified in financial terms.

A very large proportion of medium and large companies in the U.K. are of the divisionalised form and the general conclusions from CT lead to the prediction that budgets would be in use and that they would have considerable importance. However, a more careful examination of the theory and the companies reveals many situations where this might not be the case. Such situations would include:

- a) Where extreme environmental hostility has forced the organisation towards the simple structure.

- b) Where rapid technological change has resulted in the

organisation or some divisions moving towards the adhocracy.

c) Where the degree of automation in the production process has reduced the numbers of workers in the operating core to such an extent that the organisation is moving towards the machine bureaucracy.

Thus a sample of medium or large companies, such as the one used in this thesis, may all appear to be divisionalised on paper, but there may be large differences in the rôle that the budget plays because not all the companies are of the classic divisionalised form. Further, within one company which does have the divisionalised form, the individual divisions may not have similar organisational structures and so the rôle of the budget would be dependent on what part of the organisation was examined or who was questioned. This adds further theoretical evidence to the proposition that an empirical investigation is likely to find differences in the rôle of the budget in different companies.

6.3 ORGANISATIONAL POWER

6.3.1 Introduction

The existence of organisational power and its implications for the organisation have been considered by many writers, although only a few have sought to examine the effect on the rôle of the budget. This section discusses a small selection of the literature but with the intention of covering many of the important issues. Other issues related to organisational power and found in the literature are also discussed.

Before embarking on any discussion of organisational power, some definition of the terms must be given. There are numerous definitions

of power and most are in terms of the individual, often seeing power in terms of coercion or determination of behaviour. However there are also writers who see power as a feature of relations within an organisation. Hickson et al (1971) state,

"...power as a property of the social relationship, not the actor. ...power is explained by variables that are elements of the subunit's task, its functioning, and its links with the activities of other subunits. ...dependency in a social relation is the reverse of power." p 217

All definitions of power are incomplete; they are difficult to operationalise, harder still to measure. Yet it would appear from empirical work that most organisation members know what power is and who wields it! A working definition for the purposes of this chapter is one which Hickson et al quote, with an impressive array of writers who have also used it; "power is defined as the determination of the behaviour of one social unit by another".

There is an immediate link with the previous section, in that Mintzberg considers power as one of his contingent variables but not one which he elaborates greatly. A further link can be found in the paper by Hickson et al already quoted. Their paper presents a structural contingencies approach to power which uses ideas similar to those found in CT. The most important factor in their theory appears to be the units ability to cope with uncertainty. This point is stated formally in their hypothesis 1, "The more a subunit copes with uncertainty, the greater its power within the organisation". The subject of uncertainty and power will be discussed later.

6.3.2 Organisational Power and the Budgetary Process

The framework for this section is based on the paper by Covaleski and Dirsmith (1986) (hereafter referred to as 'C&D') entitled, 'The Budgetary Process of Power and Politics'. C&D begin by considering the traditional view of budgeting where a rational and efficient allocation of resources is attempted to enable the achievement of the organisation's objective. They note that as far back as 1963 "Cyert and March ...saw budgets as the results of political bargaining within organisations, subsequently fit for legitimising and maintaining systems of power and control". The basic theme of their paper is "that budgeting systems are complicit in representing vested interests in political bargaining processes and maintaining existing power relationships".

This is a theme that has been developed considerably by Wildavsky although his work has been mainly in the public sector. Wildavsky (1975) states.

"The bonds between budgeting and 'politiking' are intimate. Realistic budgets are an expression of practical politics. The allocation of resources necessarily reflects the distribution of power." p xii

"If organisations are seen as political coalitions, budgets are mechanisms through which subunits bargain over conflicting goals, make side-payments, and try to motivate one another to accomplish their objectives." p 4

" Permanent organisational interests dominate temporary policy objectives." p8

Whereas the above comments were made in relation to national budgeting, they apply also to the private sector and other writers have taken up the same themes.

The political nature of the budgetary process and the connection between power and politics are themes dealt with by Burchell *et al* (1980). They concentrate on rôles that accounting may play in organisations and society and emphasise economic rationality has not been a driving force in the development of these rôles:

"...there is little in the development of accounting as practised that would lead one to describe its essential rationale in terms of the furtherance of economic efficiency or rationality." p 10

Burchell *et al* develop a model, based on the Thompson and Tuden (1959) model, which relates the rôles that accounting may play in an organisation to two forms of uncertainty, viz uncertainty about objectives and uncertainty about cause and effect. This model is reproduced in figure 6.2.

Figure 6.2

Uncertainty and the rôles of accounting per Burchell *et al*

		UNCERTAINTY ABOUT OBJECTIVES	
		low	high
UNCERTAINTY ABOUT CAUSE AND EFFECT	low	ANSWER MACHINES	AMMUNITION MACHINES
	high	ANSWER MACHINES or LEARNING MACHINES	RATIONALISATION MACHINES

Burchell *et al* discuss the rôle of accounting in general, from which it is possible to draw out the implications for the budget. Where there is agreement over objectives (low uncertainty) and there is a good understanding of "the patterns of causation which determine the consequences of action" (ie low uncertainty), then the budget may be used to provide answers to problems facing the organisation. If there is high

uncertainty over objectives the budget may be used as ammunition in arguments between individuals or subunits. The implication is that the budget is not being used to further economic efficiency but to promote the interests of one part of the organisation.

At the position with maximum uncertainty, where Thompson and Tuden say that decisions are made by inspiration, the budget will be used to rationalise the decisions that have already been taken. Finally where there are clear objectives but uncertain causation the situation is more complex. The budget may still be used to answer problems, however the uncertainty may produce more questioning actions. The organisation participants may feel the need to explore problems, question assumptions, ascertain whatever is possible about the cause and effect relationships that they are dealing with, before making any judgement. In these circumstances the budget has become a device for organisational learning.

It can be concluded from this paper by Burchell that the traditional role of the budget for control purposes is only seen in one of the quadrants of their model. Organisations which are in a situation characterised by any of the other quadrants may have very different rôles for their budgets. The other rôles for the budget gain much of their significance from the budget setting process and the *ex post* use of the budget is less important. It is particularly in the setting of the budget that learning and rationalisation takes place; similarly it is during the budget setting process that the budget is used as ammunition to gain resources.

Cooper *et al* (1981) also question the rationality, objectivity and economic efficiency of organisational budgeting. They suggest three

possible models which can be used to explain the budgeting process, viz, a rational model, a bounded rationality model or a 'garbage-can' model. The first of these is the traditional accounting model of rational choice and economic efficiency, where the budget is used for planning, communication and performance appraisal. The second is the model uses the concept of bounded rationality advanced initially by Simon (1957) and defined as

" The capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose solution is required for objectively rational behaviour in the real world." p 198

Cyert and March (1963) develop a similar model (although called 'the adaptively rational model'), in which the emphasis shifts from a concern with the outputs of the system to a concern with the processes and uses of these systems. Thus bounded rationality models emphasise procedural rationality, consistent behaviour and do not assume omniscience.

The implications for budgeting from the bounded rationality model, are that the budgeting process is of more importance than the actual budget itself. Cooper *et al* state that various studies suggest budgeting is intended as a rational process but many factors prevent this occurring. The budget may be the product of a rational process without denying the implications of the bounded rationality model.

The garbage-can model discussed by Cooper *et al* is one developed by Cohen, March and Olsen (1972) and is one of a class of models described by Pfeffer (1981) as 'decision process' models. In this class of models it is posited that there are no overall organisational goals being maxi-

mised and no powerful actors with defined preferences and the resources to obtain their preferences. Thus these models would be found in the fourth quadrant of the Burchell *et al* model described above, where there is a high degree of uncertainty.

In the garbage-can model, decisions are the outcome of several relatively independent streams within the organisation. There are streams of:

- problems - the concerns of people, all require attention;
- solutions - someone's product, looking for a problem;
- participants - they come and go at various times in a particular choice situation;
- choice opportunities - when a decision is expected to be made.

In this model goals are discovered through action and actions are understood retrospectively. The budget process may then be viewed as a means of justifying past actions and making them appear sensible (rational) to the actor and others.

Cooper *et al* give further interpretations of the garbage-can model regarding the rôle of the budget, including the following.

Budgets are a reflection of organisational power and a tool for settling disputes.

The budgeting process may have the rôle of ritual, which provides a sense of identity and reinforces what is valued within the organisation.

The budget may be seen as myth, which helps to determine what is acceptable or not by anchoring actions to the past and to explanations of the past; "myths justify and sustain specific values in organisations".

From the comments in Cooper *et al*, particularly those which relate to the garbage-can model, it may be concluded that there is a range of rôles which the budget may play in an organisation. Some of these seem far removed from the textbook descriptions of the budget and other formulations of the budget which emphasise their rationality and economic efficiency.

6.3.3 Concluding comments

It is not possible to draw a simple conclusion from this brief analysis of the organisational power and related literature as it relates to budgeting. C&D used this perspective to examine the way that budgets and the budgeting process were being used and perceived by a particular group of users. Their conclusion was that this view of budgeting "definitely appears to be useful to an understanding of the budgeting process in the six hospitals". Further, they do not see the traditional rational view of the budget and other perspectives, which emphasise power, myth, political processes etc, as necessarily being in conflict. In fact, "the traditional perspective (on the budgeting process) and its acceptance by organisational actors serves to enhance its potency in political processes...."

The range of rôles which is apparent in this approach to budgeting is such that it is highly likely that individual members of an organisation will have differing perceptions of the rôle and importance of the budget. Similarly, different organisations may have developed different rôles from this wide range of possibilities, depending on their own circumstances.

6.4 MARKETS AND HIERARCHIES APPROACH

6.4.1 The General Approach Stated

The Markets and Hierarchies approach (hereafter called M&H) has been primarily the work of O.E. Williamson, particularly in Williamson (1975). The basic approach is from microeconomics although the distinctive features of his work concern issues which Williamson believes have been overlooked in economic theory. Williamson describes his approach as the 'organisational failures framework' and it relies heavily on the importance of transactions (Williamson also describes his approach as the 'transactional paradigm'). At the simplest level M&H states that markets and firms (hierarchies) are alternative instruments for completing a related set of transactions, and an organisation will use whichever instrument is most efficient. The costs of using the two instruments will vary depending on the characteristics of the human decision makers and the objective properties of the market.

In the M&H approach where a transaction is being conducted in a market, there is a presumption of organisational failure; the reverse is also true. The first part of the framework is an examination of a set of environmental and human factors that lead to prospective market failure and thus to transactions being conducted within the firm.

Bounded rationality. This is the same concept as used by Simon and Cyert and March (indeed Williamson wrote one of the chapters in Cyert and March (1963)). It refers to behaviour which is "intendedly rational, but only limitedly so" and refers to the limited language and computational abilities of individuals. This feature is particularly relevant when there is a high degree of uncertainty and/or complexity.

Opportunism and small numbers. Opportunism is 'self-interest seeking with guile' In conventional economics this feature is not of critical importance because the usual assumption of a large number of agents prevents an individual's self-interest from being realised. Williamson asserts that in reality there are many instances where small numbers exist, and even if there are large numbers at the time that the original contract is made at the stage of renewal small numbers will often appertain.

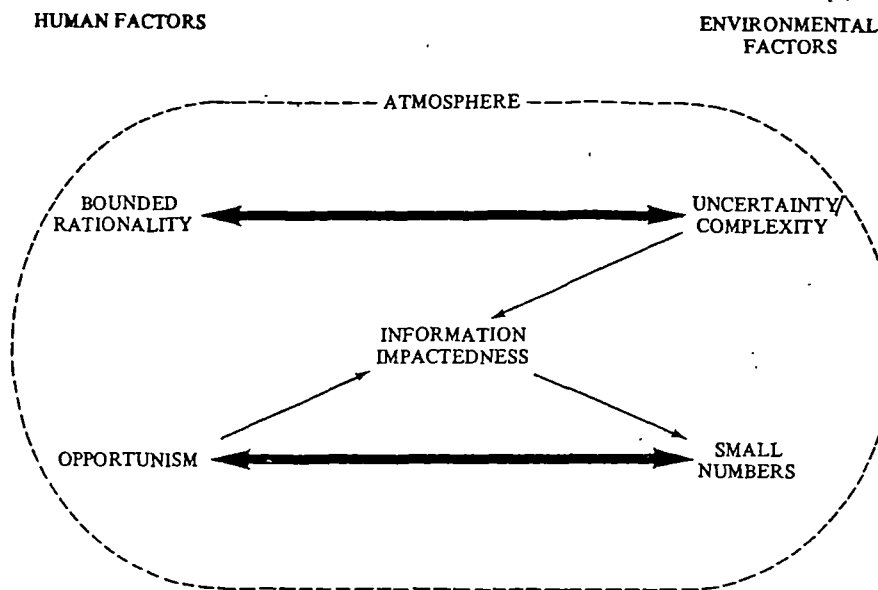
Information impactedness This "is a derivative condition that arises mainly because of uncertainty and opportunism, though bounded rationality is involved as well". The condition arises when the full information relating to a transaction or set of transactions cannot be costlessly revealed to all the parties involved. Williamson argues that within the organisation it is easier to control for information impactedness as conditions can be devised where the parties will find it in their best interest to fully reveal the information in their possession. In particular, parties may be more keen to reveal information internally than they would be to a third party and performance assessment and audit are easier to conduct within the organisation.

Atmosphere. "Reference to atmosphere is intended to make allowance for attitudinal interactions and the system consequences that are associated therewith". Williamson appears to use this term to include many of the behavioural aspects not usually dealt with in economics.

These features are summarised in a diagram from Williamson which is shown in figure 6.3

Figure 6.3

The organisational failures framework per Williamson (1975) p40



One aspect of the M&H framework that is particularly important and which has implications for budgeting is analysis of internal labour markets. Williamson argues that there are features of the internal labour market which encourage individuals to forego opportunistic behaviour and willingly work for organisational objectives. These include the nature of the wage bargain, which typically ties the wage rate to a job rather than to an individual; well documented arbitration procedures; limited ports of entry; and internal promotion procedures. All of these features may persuade an individual that commitment to an organisation and its objectives would be a better course of action than an attempt to gain the best possible contract available in the short run on an open labour market.

6.4.2 Implications from M&H for Organisation Structure

Williamson broadly supports the analysis presented in Chandler (1966) and sees the multidivisional structure (M-form) as the best

response to failures in the market. The large divisionalised organisation, with a substantial internal labour market and the resources to produce a miniature capital market, is seen by Williamson as more efficient than a unitary organisation attempting to manage a similar scale of operations. The assumption of frictionless capital markets is one which Williamson finds particularly inappropriate and he argues that the internal capital market is a major feature of M-form organisations. A range of organisational forms, based around the multidivisional form are presented, as shown below:

H-form	Holding company
M ¹ -form	Transitional multidivisional;
M-form	Multidivisional;
\bar{M} -form	Corrupted multidivisional;
X-form	Mixed .

6.4.3 The Implications for Budgeting

The form of divisionalisation envisaged by Williamson is similar to that described by Chandler. There there is a small central part to the organisation (the general office) which is responsible for long run strategy and monitoring the performance of the operating divisions. These divisions have full authority to run their affairs as long as they achieve the objectives set by the central management. It is important in this structure that the separate rôles of the central and divisional management are maintained. The budget has a number of potential rôles in the M&H framework, although these are not discussed by Williamson.

M-form organisations are more complex than unitary organisations and they need more complex internal control systems. Because of the separation of strategic and operational decision making, the central

management need a control system to ensure that the organisation's strategy is implemented. Williamson suggests that an important aspect of this is the use of incentives. Budget-based incentives are feasible (discussed further in section 6.5) and thus, this may provide a rôle for the budget that would be perceived by senior divisional and central management.

If the internal labour market is to be efficient it requires rewards that are given on the basis of good performance (performance in line with objectives). Financial rewards and promotion will both generate a demand for performance measures and what Williamson describes as 'performance histories'. Performance measured in terms of the budget clearly fits this requirement and produces another well known rôle for the budget. It is not clear in the M&H framework whether budget based performance measures are envisaged as means of controlling senior divisional management or whether it is only appropriate within the divisions; central management may not wish to be involved in the level of detail necessary to control divisional management by budget based performance measures.

Even though the perspectives of central and divisional management are different, they may both find a forecasting and planning rôle for the budget. The time horizons and objectives may be different, but this rôle would be similar. Overall the M&H approach does not say a great deal directly about the rôle of the budget, although there is considerable importance given to performance appraisal and there are many implications concerning the use of budgets. Comparison between these uses and those of the other approaches reviewed will be made later.

6.5 AGENCY THEORY

6.5.1 Introduction

Agency theory (hereafter referred to as AT) has its roots in information economics and institutional economics. It is usually presented in rigorous terms, often to allow the use of mathematical techniques. This literature is large and covers a broad range of subjects. In this section a very brief review will be undertaken; it will be non-mathematical and will only consider issues that have direct relevance to the rôle of the budget. This section draws on two papers which review the AT literature from the perspective of management accounting, namely Tiessen and Waterhouse (1983) and Walker and Choudhury (1987).

6.5.2 A Brief Outline of Agency Theory

AT deals with a world where there is a principal, who in the case, of a large business organisation could be, for example, the shareholders, board of directors, or central management; and an agent, or agents, who is engaged by the principal to perform some form of service on his behalf. Both principal and agent are wealth maximisers, and the agent's utility function also includes disutility for effort. The AT world is one of competitive markets where contracts can be made to cover most eventualities. Much of the discussion revolves around the contracts that the principal makes with the agent and of ways to enforce conditions in the contract.

Two forms of uncertainty are frequently distinguished: *ex ante* uncertainty covers the difficulty in predicting the state of the world

that will exist during the period that the contract will run; *ex post* uncertainty arises because there is not full information available to the parties concerning effort levels and skill types.

Two problems are of particular interest in AT, viz, the *moral hazard* problem and the *adverse selection* problem. The moral hazard problem occurs because outcomes are jointly determined by the state variable and the effort level of the agent. The principal in many circumstances is not able to distinguish between the effects of these two variables. The adverse selection problem arises if skills are not directly observable and agents claim to have skills which they do not possess, as the outcomes cannot be used to infer skill levels.

Within AT uncertainty is a form of contingency variable. For example, where an organisation has highly structured operations, as a result of a predictable environment or routine technology, it may be possible to make a contract for effort levels. Under these circumstances effort is virtually the only variable and thus output is an accurate proxy for effort. Circumstances where this is likely to occur are uncommon and the more usual position is that output cannot be used as the basis of a contract without incurring moral hazard problems. In the search for contracts which will share uncertainty between the parties, provide motivation for the agent to give a high level of effort and be a pareto improvement on a simple wage contract, the budget has been examined. The resulting use of the budget is dealt with in the next section.

6.5.3 Rôles for the Budget in Agency Theory

In the basic AT model the principal is seeking a contract which

will simultaneously provide the optimum effort level and the optimum reward function. The principal is seeking the maximum effort at least cost whilst the agent is seeking the converse. Budget based contracts have been advanced as a solution to this problem. A simple representation of this class of contracts is given by Walker and Choudhury:

$$w(x) = f(x) \text{ if } x \geq \hat{x} \text{ and}$$

$$w(x) = g(x) \text{ if } x \leq \hat{x}$$

where \hat{x} represents the budget level and $w(x)$ is monotonically increasing.

There are two particular forms of budget based contract which are considered by Demski and Feltham (1978) and others who have reviewed this literature.

The first is called the 'bang-bang' contract. Using the formulation above, this contract is of the form:

$$f(x) = a \text{ and } g(x) = b$$

where a and b are constants, and $a \geq b$

The second is the dichotomous contract, which is of the form:

$$\text{i) } f(x) = c \text{ and } g(x) = dx + k \text{ or}$$

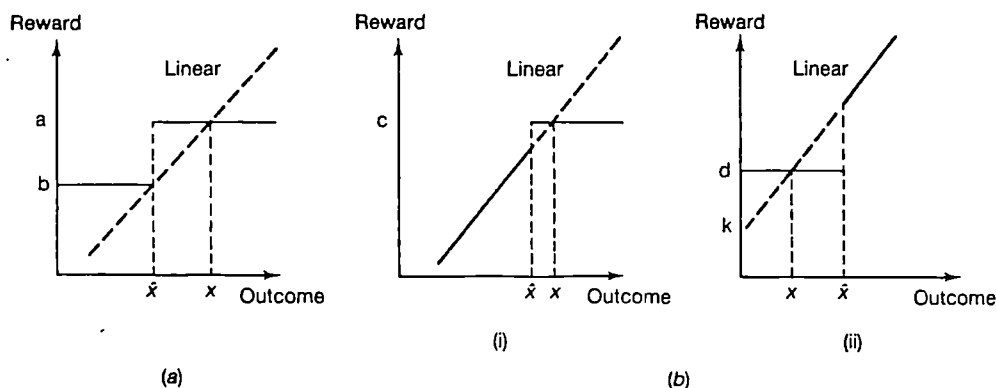
$$\text{ii) } f(x) = cx + k \text{ and } g(x) = d$$

where c, d and k are constants

These contracts are shown in figure 6.4

Figure 6.4

Budget Based Contracts as per Walker and Choudhury p89



In the bang-bang contract, if the outcome is above budget the agent receives a high reward, whereas if the outcome is below the budget level, a much lower reward is paid. In the dichotomous contract, the agent is paid a fixed wage if the outcome is above budget and if the outcome is below this level, he would receive what he would have received had a linear compensation contract been in operation. Demski and Feltham demonstrate that for both of these budget based contracts there exist sets of acceptable circumstances which produce a pareto improvement over the linear contract with which they are being compared.

An important necessary condition for budget based contracts to be superior to other contracts where there are moral hazard or adverse selection problems, is that it should be costly to observe both the worker's effort and the state. This does not appear to be an unduly harsh condition. Further, Feltham and Demski found it much easier to find acceptable sets of circumstances in which the bang-bang contract could be shown to be pareto superior than it was to find similar circumstances for the dichotomous contract. This again provides few problems as the bang-bang contract would be easy to implement and is of a form that has been used in practice .

Demski and Feltham also demonstrate that there are circumstances where budget based variance investigation contracts are pareto superior to skill differentiating contracts. There are various conditions attached to this result and it has not been demonstrated in the general case.

6.5.4 Comment and Conclusions

This small aspect of the AT literature does reveal a rôle for the budget which has not been emphasised in the other approaches discussed in this chapter. The motivation of employees by means of the budget was discussed in chapter 2 and there is a large literature from other disciplines in the social sciences which has been brought to bear on this accounting issue. AT, from its roots in economics, brings a different perspective. It says little about how budgets may be used to motivate. Rather it concentrates on demonstrating that the use of the budget to bring about increased effort is a rational objective for senior management (the principal) as such a practice is superior to other strategies available.

This rôle for the budget is clearly demonstrated within the framework of AT, however, there are some serious issues which arise if normative conclusions are drawn from this theory. AT is clearly an abstraction from the real world; it does not include all the features which a face a business organisation. Its defence would be that it includes the essential aspects and no model is comprehensive. At the heart of AT is the agent's utility function which has two elements: wealth maximisation and the disutility of work. If this is compared to other literature in the social sciences it appears to be a poor representation of what motivates individuals (and says nothing about any motivation that may arise through belonging to groups of individuals). Two aspects of this weakness are particularly important. First, what is not included, i.e. individuals may gain utility from many items other than wealth. Second, there is evidence that work does not always cause disutility; satisfaction from work is not unknown!

There are also major problems concerning the empirical testing of AT. Walker and Choudhury comment on this concluding that there are many aspects of AT where there is currently no prospect of tests being developed. The area of budget based contracts, where some testing has been done, is one where more work may be able to give weight to the conclusions that have been drawn from the theory. In the light of these comments, one must be more than usually careful in drawing normative comments from AT.

6.6 COMPARISONS AND THE RÔLE OF UNCERTAINTY

In the preceding sections, four organisational paradigms have been examined. The objective has been to draw out implications concerning the rôle of budgets in organisations. The purpose of this section is to draw together these approaches and make some concluding remarks.

Organisations and budgets have been in focus throughout this discussion. One of the important issues is whether these four paradigms are equivalent to four different perspectives on the same subject, or whether different subjects are being viewed. It would be usual to expect that different views of the same subject would produce different pictures; if a house were viewed in close-up only the house itself would be seen, whereas if it were viewed from a distance then it would be seen in its context. Similarly, these four paradigms might produce different pictures but each one adding insight as they were all viewing the same subject. Such a position would be desirable, as it would enrich our understanding of the rôle of the budget. On the other hand, it is also possible that the terms used may be referring to different subjects and thus any comparison would be fruitless.

Tiessen and Waterhouse (1983) have made a comparison of M&H, AT and CT. Their starting point was CT and referring to the other two they state:

"The fundamental ideas advanced in these literatures are complementary to contingency theory and may serve to enrich it."

p 262

The comparisons in this section are made from a similar perspective i.e. that these approaches reveal different aspects of the rôle that the budget may play in an organisation. None of the approaches is complete, and what is lacking in one may be found in another.

6.6.1 Comparisons

This section will commence by briefly noting some of the differences between the approaches that have been reviewed. CT and M&H draw conclusions about the structure of the organisation, whereas AT and the organisational power approach says little or nothing about this. Structure is an important variable in the first two approaches but the conclusions of the organisational power approach are independent of the organisation's structure and AT usually ignores this detail. In M&H the M' Form is advocated as a universally superior form of structure for 'large' organisations. In CT, structure is conditional or contingent on a number of variables.

The organisational power literature adopts a more social approach than the others. It is particularly concerned with the social rôle that the budget plays. At times it may appear remote from reality; it is unlikely that anyone working in a large organisation would consider the budget as myth or ritual, or recognise the concepts that lie behind

these terms. However, these analogies may be helpful in understanding why certain behaviour occurs or attitudes are held.

AT may also appear remote from reality but at the other end of the spectrum. The assumptions that are needed to enable the problems to be analysed in mathematical terms result in the problems being an abstraction. The assumptions in AT concerning near perfect markets are clearly different from those in M&H where market failures are of the essence. The normative conclusions that are drawn from AT have to be treated with considerable caution, and empirical testing is particularly difficult.

Having discussed some of the differences between these approaches there are also some important similarities. All these approaches consider the organisation's context to some degree. This is the essential feature of the CT approach as the conclusions depend upon the contextual variables. AT gives the least rôle to organisation context as it adopts a set of assumptions which include this aspect but context is not a variable.

These approaches all incorporate the power relations within the organisation, again in varying ways. The organisational power literature deals with this most thoroughly; power is a contingent variable in Mintzberg's analysis; and in M&H and AT the power relations between senior and divisional management are important features. There are two other areas that will be dealt with separately below, viz, the rôle of uncertainty and the general conclusions.

6.6.2 The Rôle of Uncertainty

Tiessen and Waterhouse (1983) recognised the important rôle that uncertainty played in the three theories that they reviewed (CT, AT and M&H) and this is equally true of the organisational power approach. The crucial place of uncertainty in these approaches will now be considered and compared. There are various forms of uncertainty, therefore, unless specifically stated otherwise, uncertainty in this section refers to environmental uncertainty.

In CT, as explicated by Mintzberg, uncertainty is one of the most powerful contextual variables. Two aspects of uncertainty are considered: the environment can be measured on a scale from stable to dynamic, and on a scale from simple to complex. Some writers view this in one variable on a scale from predictable to unpredictable where uncertainty is the lack of predictability. The implication drawn from this by Mintzberg is that where the environment is dynamic, the organisation structure will tend to be organic; where the environment is complex, the structure will become decentralised. These variables, along with others, determine the type of structure and the budget will play different rôles depending on the structure.

In this indirect manner, uncertainty has a clear impact on the rôle of the budget. It is in the divisionalised form that the budget has its largest rôle and this form is only likely to occur under certain conditions. One of the important conditions is that there should be a relatively stable and simple environment. Under more complex and dynamic environments other organisational structures will develop, which have a smaller rôle for the budget.

Bruns and Waterhouse (1975) discuss an organisation which is decentralised and structured, and which faces a stable environment. Such an organisation is not one of Mintzberg's typical forms as his analysis suggests that a technologically complex environment will result in decentralisation but not the high degree of structuring that is proposed and empirically found by Bruns and Waterhouse. However the conclusion that decentralised and structured organisations will have a major rôle for the budget in control is critically dependent on the stable environment, i.e. where there is little uncertainty.

In the organisational power and related literature that has been reviewed, uncertainty was a key feature. Burchell *et al* presented the adaption of the Thompson and Tuden model which, in simple form, shows the effect on accounting of two forms of uncertainty. One is internal and relates to objectives, whereas the other is a form of environmental uncertainty which is revealed in the lack of knowledge of the cause and effect relationships. A high degree of uncertainty in both dimensions of their model produces a rôle for the budget which is a rationalisation of actions and decisions already taken. This is a very similar result to that found in Cooper *et al* and their examination of the implications of the 'garbage-can' model which is a description of actions under high degrees of uncertainty.

The M&H approach incorporates an important rôle for uncertainty. The concept of bounded rationality, which is probably the crucial element in the organisational failures framework (really a market failures framework), becomes critical because of uncertainty. It is market failures that gives rise to the divisionalised form in which budgets have a major rôle. Some critics of the M&H approach argue that the treatment of uncertainty is a serious weakness in Williamson's

analysis. In particular that treating uncertainty as ubiquitous, and effectively as a constant, is inadequate and uncertainty needs to be treated as a causal variable. It is this treatment of uncertainty that leads to the result that the M-Form organisation is universally appropriate.

In AT the concept of *ex ante* uncertainty is a form of environmental uncertainty. *Ex ante* uncertainty can be viewed as a contingent variable in that where uncertainty is minimal, accurate predictions are possible and contracts based on output can be used as measures of effort. This leads to a conclusion that budget based contracts will be important in situations where there is uncertainty and output contracts would result in an unacceptably high moral hazard problem.

6.6.3 General Conclusions from the four paradigms

6.6.3a *Uncertainty and the rôle of the budget*

The relationship between uncertainty and the rôle of the budget is complex and so any general conclusions must be treated with care, in the knowledge that not all specific cases will follow the general conclusions. The relationship is summarised in the following table.

The Relationship between Uncertainty and the Rôle of the Budget

	UNCERTAINTY	INTERVENING EFFECTS	RÔLE OF THE BUDGET
Mintzberg	low	Bureaucratic or Divisionalised Structure	Traditional control
B&W	low	Decentralised but structured	Traditional control
Organstn. Power	low	Answer machines	Traditional control
M&H	ubiquitous	Bounded rationality → M-Form structure	Traditional control
AT	low high	Effort observed in output Acute moral hazard problems	No control rôle for budget Budget based contracts

From the above summary it is possible to conclude that the CT and organisational power literature suggest that under conditions of low environmental uncertainty the traditional control rôle for the budget will be important. The M&H literature does not contradict this, but different levels of uncertainty are not considered. Therefore it is possible within this approach that high levels of uncertainty would still produce the M-Form structure in which the budget has a control rôle.

The AT approach does not produce a conclusion that is consistent with the others. Where there is low uncertainty, there is no need for control by a budget based system as control can be maintained by observation of physical output and by ensuring that specified procedures are followed (Tiessen and Waterhouse (1983) p 256). Under high levels of uncertainty there is a rôle for the budget in motivating high levels of effort through the use of budget based contracts. The assumptions upon which AT is based and its roots in information economics cause it to be noticeably different from the other paradigms that have been

adopted in this chapter.

The general conclusions from CT, M&H, and organisational power are compatible under conditions of low uncertainty. However, where conditions of high uncertainty prevail there is greater diversity in the conclusions. The CT literature concludes that uncertainty is one of the major contingent variables which determine organisation structure and it has been concluded in this chapter, that in different organisational forms there will be different rôles for the budget. In the review of the organisational power literature, it was noted that under conditions of high uncertainty, the budget took on rôles that were quite different from the traditional control aspects. Under such conditions the budget plays a more direct rôle in the determining of the balance of power in an organisation; it is used in the political process; the budget setting process may be of vital importance; and the rôle of the budget may not be obvious within the organisation (rôles of myth and ritual, for example, may only be clear to outside observers).

Thus it may be concluded that these paradigms do not produce similar conclusions under conditions of high uncertainty. However, it is not clear that these more diverse rôles are incompatible. When there is high uncertainty, the picture becomes more complex and a greater number of rôles may coexist.

6.6.3b *Other rôles for the budget*

The majority of the implications that have been drawn from the review of these four paradigms have concerned the control or performance appraisal aspects of the budget. Chapter 2 indicated that there are other commonly discussed rôles and the results of the study in chapters 4 and 5 confirmed that these were perceived in the sample of

companies investigated.

The planning and forecasting rôle have been mentioned and it is likely that this is the most widespread of all rôles. Except under the most extreme conditions of uncertainty a planning budget would be feasible and highly likely. The related rôles of communication and coordination have been given little importance in this chapter, yet they figure clearly in the review in chapter 2 and they are not unimportant in the findings of chapter 4.

There have been few comments regarding motivation in the CT, M&H and organisational power literature. The discussion in AT is at a level of abstraction which is almost divorced from the actual organisation and bears little relation to the issues regarding motivation that have been discussed in the rest of the accounting literature.

This rather limited view of the rôles of the budget, which emphasises the control aspects, will be discussed further in chapter 7. These four paradigms yield helpful insight into the rôles which the budget may play, in some important aspects their implications are compatible, but there are some serious limitations in the scope of these implications.

CHAPTER SEVEN

CONCLUSIONS AND IMPLICATIONS FOR FURTHER RESEARCH

In this chapter the conclusions from the previous chapters will be reviewed. A comparison will then be made between the empirical findings and the conclusions regarding the rôle of the budget from the main organisation paradigms, before proceeding to some overall concluding comments. The research has revealed a number of areas where important issues deserve further investigation. These areas, for future research have been noted in the final part of this chapter.

7.1 PREVIOUS CONCLUSIONS REVIEWED

In chapter 2 the 'traditional' literature on budgeting was reviewed to enable a number of working propositions to be advanced for empirical examination in chapters 4 and 5. This literature is extensive and there have been many important contributions in recent years. There is no indication from this review that there is any waning of interest in the general subject area of budgeting.

7.1.1 Conclusions from Chapter 4

In chapter 4 five general propositions were examined using the data gained from thirteen U.K. companies. The propositions covered: the rôle of the budget, the existence and consequences of budget pressure, the attitudes towards participation, and the causes of the differences between the companies. The conclusions from chapter 4 are set out below

Proposition 1. The company budget is most commonly viewed as a forecast of future performance; however, there is a sizeable minority, spread through all the companies, who perceive some target element in the budget.

Proposition 2. The use of the budget as a control device through the calculation and explanation of variances was considered one of the major purposes of the budget, along with forecasting, assisting profit maximisation and judging performance.

Proposition 3a. The pressure felt by most respondents in this study was not perceived as emanating from accountants or senior management; the greatest pressure experienced was internally generated and indicates that the major motivation was personal.

Proposition 3b. There was no indication that pressure to meet the budget caused dysfunctional behaviour; in fact, 86% of respondents considered increased pressure would be beneficial, even though 97% of respondents had experience increased or constant pressure in the preceding year.

Proposition 4. General participation in the setting of the budget was not a feature found in these companies though, in all, there was a desire to see increased participation. This desire was most strongly expressed by accountants.

Proposition 5. The differences found between the companies could not be explained by systematic differences in their organisation, structure and environment. However, the particular unusual features of individual companies could usually be understood in the light of their particular circumstances. This may indicate that:

- (a) the relationships that could provide systematic explanations of the differences between companies are more complex than this study was able to elucidate, or
- (b) the most important explanatory features are company specific and are not likely to produce systematic explanatory relationships.

There was also a general conclusion which indicated that the respondents in this sample believed that the budget should have increased importance.

7.1.2 General Conclusions from Chapter 5

Chapter 5 examined the perceptions and attitudes of three important user-groups, using similar propositions to those in chapter 4. The main conclusions from chapter 5 were as follows.

Proposition 1. There is general agreement among the user-groups that the budget is primarily intended as a forecast of future expected performance. The senior managers would prefer this forecast rôle to have less importance. There is general agreement that the budget does not have a target or motivational element, but this is not as clearly expressed as for the forecast rôle. A minority of senior managers indicated that there were budget-related incentives, particularly via promotion prospects, which did add a target or motivational element to the budget.

Proposition 2. The general conclusion was that the three user-groups agree that the budget in their company is used as a control device

through the calculation and investigation of budget variance. The senior managers gave more importance to this rôle and accountants less.

Accountants give less importance to the general business oriented rôles for the budget of IIMAX and COMM. From the comments above there is a picture of the SNFM group who want the budget to have a decreased forecasting rôle, an increased control rôle, and to maintain the high level of importance given to the business oriented purposes of the budget. This group also sees a greater motivational rôle for the budget. These differences are not great but amount to a difference in emphasis which can be seen in the responses of the senior non-financial managers.

Proposition 3a. The two groups of managers give strong support to the proposition that pressure will result from use of the budget as a control device. Only half the accountants have this view.

Proposition 3b. The two groups of managers felt that the greatest source of pressure was self-generated and thus there was little evidence of resentment of the budget. However, accountants felt this self-generated pressure had only the same importance as some of the external sources of pressure. This may result in accountants who feel pressure to meet the budget (only half in this study) may also feel the resentment predicted by the literature. The user-groups agree that budget pressure does not produce dysfunctional behaviour.

Proposition 4. The existence of only limited participation and a general desire for greater participation were found in all user-groups. It was hypothesised that accountants, for reasons of control and power, would want less participation, but the results show them as the most keen for greater participation.

7.1.3 General Conclusions from Chapter 6

Chapter 6 contains a review of four paradigms from the literature on organisations and an examination of the implications for the rôle of the budget. Under conditions of low uncertainty, CT, M&H and organisational power produced similar conclusions, viz, that there is an important rôle for the control aspects of the budget. The conclusions from AT were not compatible.

Under conditions of high uncertainty there was a greater diversity of conclusions. The traditional control or performance appraisal rôle had a much smaller part and rôles which adopt a wider organisational view were more important. These rôles often stressed the procedural aspects of budgeting.

7.2 COMPARISON OF THE MAIN CONCLUSIONS

There are some important comparisons that can be made between the conclusions from chapter 6 and those from the empirical study. Three of the organisation paradigms recognise that there is a major rôle for the budget under conditions of low uncertainty. The rôle envisaged in this literature appears to be that of traditional control or performance appraisal. There is no definition of 'low uncertainty', however it is the researcher's belief that the majority of medium and large companies are operating in conditions which could be so described. There is evidence for this in the study where there is a clear conclusion that all but one of the companies investigated are using the budget as a control device.

The conclusions from chapter 4 also indicate that there are other equally important rôles that the budget is playing in these companies. In particular, forecasting and planning, generally assisting profit maximising behaviour, and to a slightly lesser extent communication, are important. The literature reviewed in chapter 6 includes very little on these issues. It would appear that these important rôles for the budget have been overlooked by writers outside the accounting literature. This may be because the writers see these other rôles as mundane or unproblematic and thus they do not merit inclusion in their theories. Alternatively, these issues may be deemed to be too detailed to find a place in organisation paradigms which take a broader view.

The result of this is that the perception of the rôle of the budget in the organisations which have been examined is not fully in accord with the descriptions in the organisation paradigms that have been reviewed. The empirical evidence has come from a broad cross-section within the organisations and although it does not contradict the theoretical position, it reveals that the paradigms reviewed may be seriously inadequate in their treatment of the budget.

The literature reviewed in chapter 6 suggests that the budget may take on much wider rôles in organisations which are faced with high degrees of uncertainty. The companies that form the sample in this study were not facing high levels of uncertainty, but some were in an intermediate position where the markets they faced were undergoing change and long term prediction was difficult. The questionnaires do not give any indication of budget uses which would be in accord with the predictions in conditions of high uncertainty. In fact the questionnaires and the interviews with the senior financial official only produced evidence of the 'accounting oriented' rôles for the budget.

7.3 CONCLUDING COMMENTS

In the introduction the primary objectives of this thesis were stated. The first was to seek a better understanding of the rôle of the budget in U.K. medium and large sized companies. The sample of thirteen companies, comprising 210 respondents, is not unrepresentative of this class of companies and so the conclusions that have been drawn in chapter 4 give a good indication of the role that the budget plays in these companies. Similarly for the conclusions outlined below, this study has been able to add some interesting new knowledge.

Interesting results have been found concerning the existence, source and consequences of budget pressure, which cast fresh light on the conventional understanding of this issue. Participation in the budget setting process was not great and there was a general desire for increased participation.

The perceptions of three important user-groups have been investigated. There is a large degree of similarity in their perceptions and attitudes, and some interesting differences, particularly regarding the motivational use of budgets, the effects of budget pressure and the desire for increased participation.

When these results are put in the context of the wider literature review in chapter 6 it would appear that for the most common situation, where there is not high uncertainty, it is the accounting literature and the results of this empirical study which have the broader rôle for the budget. This study was not able to make comparisons under conditions of high uncertainty.

7.4 AREAS FOR FURTHER RESEARCH

There are a number of areas, most of which have been noted in the preceding chapters, where further research would be beneficial to confirm aspects where this study has found unconventional results or to elucidate areas of uncertainty. These aspects for further research are given below.

In section 2.6.3b it was noted that organisational attitudes were important features in the relationship between participation and improved performance. However as it was also seen that participation could be an important factor in improving organisational attitudes, there appeared to be a circularity that could fruitfully be explored.

The conclusions from chapter 4 indicate that the budget plays a very small part in the motivation of employees, except indirectly for some senior managers. Information concerning what motivates middle and low level managers would be helpful generally and in the operation of management accounting systems in particular.

The results that budget pressure is primarily self-generated and not resented is contrary to the prevailing view in the literature. The majority of the literature on this subject has come from the U.S.A. There is a need to confirm or refute the results found and to explore further whether there are differences between the U.K. and U.S.A., particularly in the areas of budget pressure and budget based motivation. Linked with the above is the need for further investigation into what has produced the state where there is a high degree of self generated pressure, as such pressure is likely to produce better long

term results than high levels of external pressure.

Some of the results in chapter 5 imply that accountants have a less business oriented view of the budget. With increased comment from professional accounting bodies about the need for business aware accountants, it would be helpful to know if the result found here was general.

Finally, the effects of high levels of uncertainty on the rôles which the budget may play has not been examined in this study. The area has received some attention, for example, studies into the effects of advanced technology and rapidly changing markets on management accounting, sponsored by C.I.M.A., but much more will be needed before a good understanding will be achieved.

UNIVERSITY OF BRISTOL
DEPARTMENT OF ECONOMICS

QUESTIONNAIRE : THE ROLE AND PERCEPTION OF BUDGETS

NOTES :

- 1) This questionnaire is confidential and no individual's reply will be communicated to any company taking part.
- 2) It is important to the success of the questionnaire that each participant completes the questions without consulting other employees of the company.
- 3) Any questions or comments on the questionnaire should be made to :

Stephen R. Lyne
Lecturer in Accounting
University of Bristol
Department of Economics
40 Berkeley Square
BRISTOL
BS8 1HY

Telephone : Bristol (0272) 24161, ext. 75.

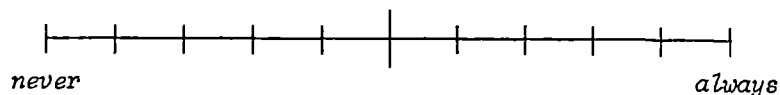
QUESTIONNAIRE

INTRODUCTION

i) The questionnaire is being asked to gather much needed information concerning budgeting practices in UK companies. Because of this, the questionnaire is being answered by many different people and thus some of the questions may not appear particularly appropriate to your situation. Nevertheless, it is vitally important that you answer all the questions.

ii) In this questionnaire you are frequently asked to give your answer by marking a scale in the appropriate place. Two examples are given here to demonstrate how to use these scales :

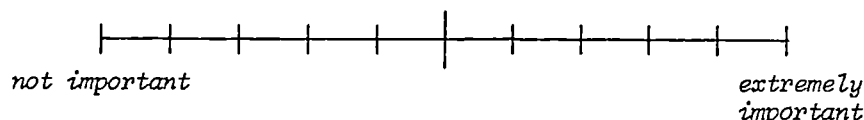
(a) Suppose the question was "How often are you late for work?" and the scale looked like this :



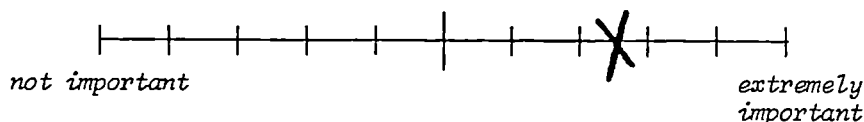
If you were late once a week on average, your answer would be :



(b) Suppose the question was "How important is Kevin Keegan to the success of the England football team?" and the scale was like this :



If you thought that Kevin Keegan was very important but there were other important matters also, your answer would be :



iii) The scales are always labelled for each question so that you know what each end means. You are required to mark on the scale the point which best shows your answer to that question.

Please give the following information :

Name of the company who employs you _____

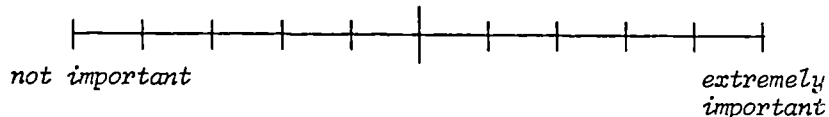
Title of your job _____

Length of time that you have worked for the company _____ years

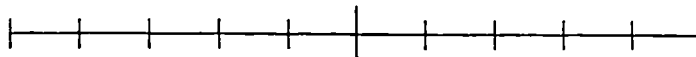
Length of time that you have been in your present job _____ years

- A. Please indicate how important you think each of the following objectives is in your company. Mark on the scale at the point which best describes your company.

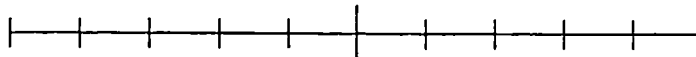
To maximise sales



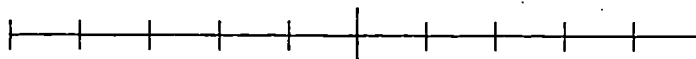
To maximise profits



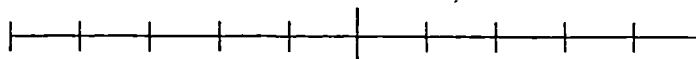
To stay in business



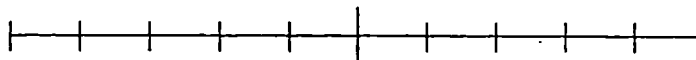
To produce high quality goods at competitive prices



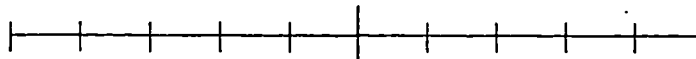
To do what is best for customers



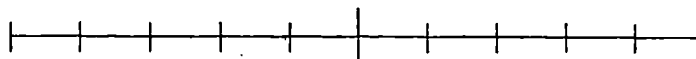
To do what is best for employees



To do what is best for shareholders



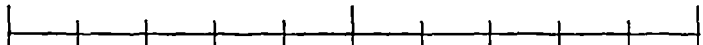
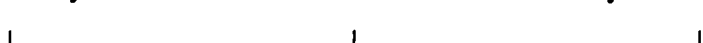

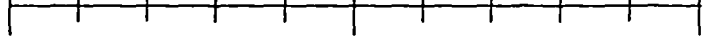

To increase company's market share



B1. Please indicate how much influence each of the following groups have in determining the objectives for your company. *Briefly look at question B2 before you complete this question.*

	no influence	total influence
Top central management		
Top divisional management		
Accountants		
Shareholders		
Other people in the company		

B2. Now, indicate how much influence you think each of these groups ought to have in determining company objectives.

Top central management	
Top divisional management	
Accountants	
Shareholders	
Other people in the company	

C1. Budgets may have a number of different purposes to fulfil within your company. Indicate how important you think each of the following purposes is for your company. Briefly look at question C2 before you complete this question.

To forecast the future	
To assist in profit maximising	
As a means by which management communicate to other levels in the company	
To judge performance	
As a means of calculating rewards	
To motivate employees to do better	
To control performance by calculating and investigating variances	
Any other purpose you think is important (please state below)	

C2. Now indicate how important you think each of these purposes ought to be.

To forecast the future	
To assist in profit maximising	
As a means by which management communicate to other levels in the company	
To judge performance	
As a means of calculating rewards	
To motivate employees to do better	
To control performance by calculating and investigating variances	
Any other purpose you think is important (please state below)	

C3. Which one of the following best describes the budget in your company (*tick one of the following*) :

- Average past performance
- Realistically attainable performance but not too loose
- A target to be aimed for
- A forecast of expected performance
- Performance under normal conditions
- Such high performance that no-one can ever make it

D1. Within your company various groups will have influence when the budget is being drawn up. Indicate below how much influence each of the following groups have in your company. *Briefly look at question D2 before you answer this question.*

Top central management	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> </div> <div style="display: flex; justify-content: space-between; width: 100%; margin-top: 5px;"> <i>no influence</i> <i>total influence</i> </div>
Top divisional management	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> </div>
People throughout the firm	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> </div>
Accountants	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> </div>
Any other group (please state below)	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> </div>

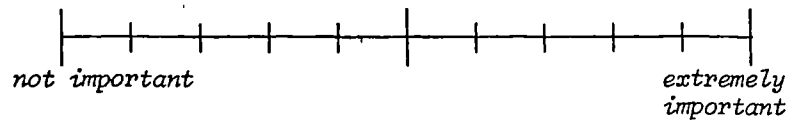
D2. Now indicate how much influence you think each group ought to have when the budget is being drawn up.

Top central management	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> </div> <div style="display: flex; justify-content: space-between; width: 100%; margin-top: 5px;"> <i>no influence</i> <i>total influence</i> </div>
Top divisional management	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> </div>
People throughout the firm	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> </div>
Accountants	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> </div>
Any other group (please state below)	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px; bottom: -5px; width: 10px;"></div> <div style="position: absolute; right: 0; top: -5px; bottom: -5px; width: 10px;"></div> </div> </div>

E1. Do you receive any financial reward for achieving the budget you have been given (e.g. bonus, commission etc.)?

Yes/No (delete as appropriate)

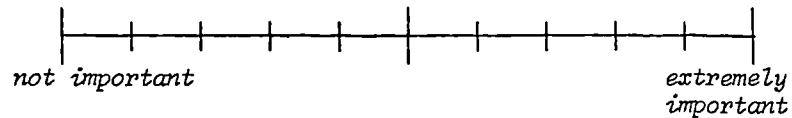
If you answer 'Yes', how important is this reward in relation to your salary?



E2. Do you suffer any financial penalty for not achieving the budget?

Yes/No

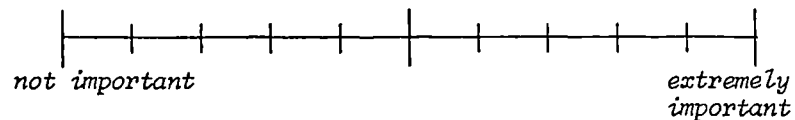
If you answer 'Yes', how important is this penalty in relation to your salary?



E3. Do you receive any financial reward for "good performance" in your job?

Yes/No

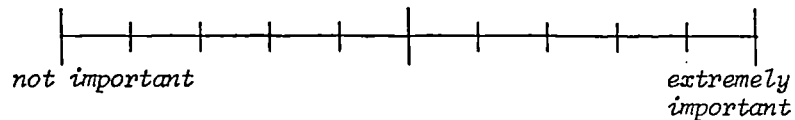
If you answer 'Yes', how important is this reward in relation to your salary?



E4. Do you suffer any financial penalty for "poor performance" in your job?

Yes/No

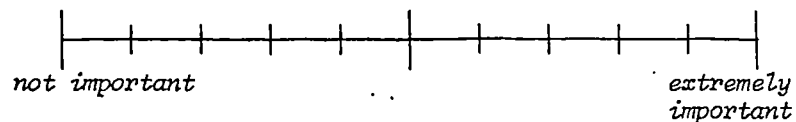
If you answer 'Yes', how important is this penalty in relation to your salary?



E5. Do you consider that your promotion prospects depend in part on your ability to achieve the budget?

Yes/No

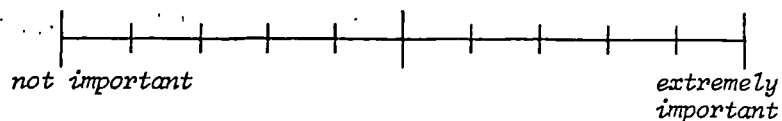
If you answer 'Yes', how important is achieving the budget to your promotion prospects?



E6. Do you receive any non-financial rewards (e.g. 'perks' of some form) for achieving the budget or "good performance"?

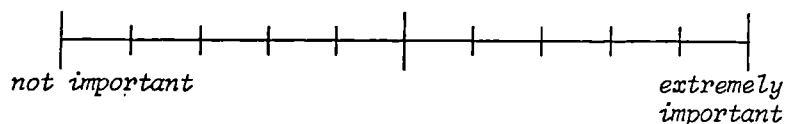
Yes/No

If you answer 'Yes', how important are these rewards in relation to your salary?

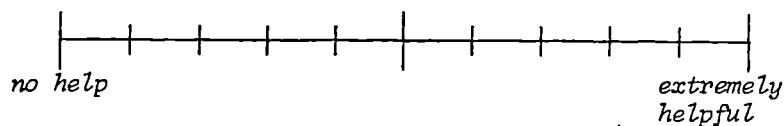


E7. Please give brief details of any of these non-financial rewards or penalties.

F1. How important is the budget in attaining the company's primary objectives?



F2. How much does the budget help to improve individual performance?



F3. Does the budget ever hinder the improvement of your performance?

Yes/No

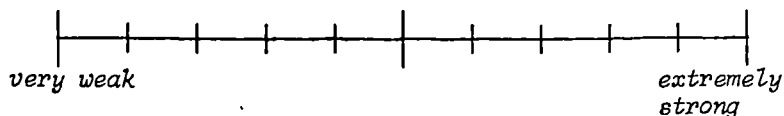
(delete as appropriate)

G1. Do you feel any pressure put on you to meet the budget?

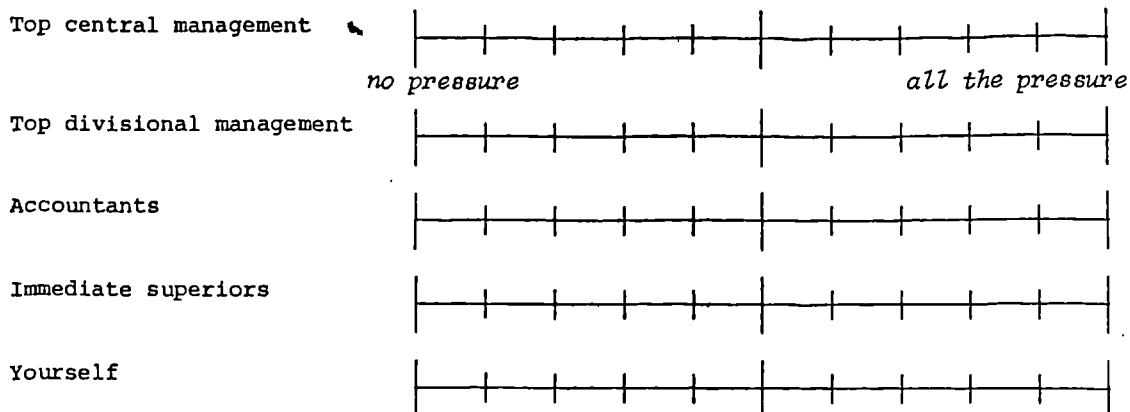
Yes/No (delete as appropriate)

If you have answered 'Yes', then complete the next two parts.

G2. How strong is this pressure to meet the budget?



G3. How much of this pressure comes from the following groups?



G4. Do you think more or less pressure to meet the budget would help in attaining the company's major objectives?

more pressure/less pressure (delete as appropriate)

G5. During the last year or so has any pressure on you to meet the budget

increased/remained constant/decreased (delete as appropriate)

G6. If there has been any change, why do you think this has occurred?

Thank you for completing this questionnaire; your co-operation is appreciated and without it this research could not take place.

A stamped-addressed envelope is provided for you to return the completed questionnaire. It will be a great help if you could do this as soon as possible.

APPENDIX 2

Characteristics of Companies in Sample						
<i>Company</i>	<i>Employees</i>	<i>Turnover £m</i>	<i>Company Part of a Group</i>	<i>Products</i>	<i>Markets</i>	<i>Production Cycle</i>
1	2,170	> 100	Yes	Chocolates	Almost all UK	Long lead on new products
2	3,300	80	Yes	Undercarriages, hydraulics, etc.	$\frac{2}{3}$ export $\frac{1}{3}$ governments	2 year lead time on new products
3	3,000	70	Yes	Avionics and communication systems	$\frac{1}{2}$ export sizeable govt. share	Long
4	11,000	500	Yes	Aircraft	Worldwide substantial govt. share	Long
5	1,550	40	Yes	Packaging	10% UK market share	Short
6	3,500	400	Yes	Oil products	UK market mainly price taker	Very high capital commitment
7	610	15	No	Sand extraction and concrete products	Mainly local	Short
8	1,100	31	Yes	Electronic components	20% export 40% government 40% UK	Varied
9	750	24	No	Ball and china clay	75% export	
10	2,000	50	Yes	Aircraft environmental systems	90% aircraft $\frac{1}{3}$ government	1 year or longer lead times
11	625	15	Yes	Textiles	40% industrial 60% general	Short
12	510	11	No	Household and industrial brush products	UK	Short
13	2,000	170	Yes	Cellophane and packaging	Market declining but share increasing	Continuous

APPENDIX 3

EXPLANATION OF ACRONYMS AND ABBREVIATIONS

AOCT	Accountants
APP	Average Past Performance
AT	Agency Theory
B&W	Bruns and Waterhouse (1975)
BS	Budgetary Slack
COMM	Budget purpose; As a means by which management communicate with other levels in the company
CONVAR	Budget purpose; To control performance by calculating and investigating variances
CT	Contingency Theory
FEP	Forecast of Expected Performance
FLM	First Line Management
FORECAST	Budget purpose; To forecast the future
JUPERF	Budget purpose; To judge performance
IMSUP	Immediate superiors
M&H	Markets and Hierarchies
MOTIV	Budget purpose; To motivate employees to do better
OTHP	People throughout the firm
PUNC	Performance Under Normal Conditions
RABNTL	Realistically Attainable But Not Too Loose
RAPM	Reliance on Accounting Performance Measures
IMAX	Budget Purpose; To assist profit maximising

REWARD	Budget purpose; As a means of calculating rewards
SNFM	Senior Non-Financial Managers
TARGET	A target to be aimed for
TCM	Top Central Management
TDM	Top Divisional Management
TOOHI	Such high performance that no-one can make it
YOUSF	Yourself

REFERENCES

- Amey, L. R. (1973), "Hindsight vs Expectations in Performance Measurement", in Amey, L.R., Readings in Management Decision, Longman.
- Amey, L. and D. A. Egginton (1973), Management Accounting - A Conceptual Approach, Longmans.
- Argyris, C. (1952), The Impact of Budgets on People, The Controllershship Foundation, New York.
- Arnold, J. and A. Hope (1983), Accounting for Management Decisions, Prentice Hall International.
- Baggott, J. (1973), Cost and Management Accounting Made Simple, Heinemann.
- Bailey, N.T.J. (1964), Statistical Methods in Biology, English Universities Press.
- Batty, J. (1978a), Advanced Cost Accounting, MacDonald & Evans.
- Batty, J. (1978b)(ed), Cost and Management Accounting for Students, Heinemann.
- Becker, R.A. and J.M. Chambers (1984), S, an Interactive Environment for Data Analysis and Graphics, Wadsworth.
- Becker, S.W. and D. Green (1962), "Budgeting and Employee Behaviour", Journal of Business, 1962, pp. 392-402.
- Bonini, C.P. (1963), Simulation of Information and Decision Systems in the Firm, Prentice-Hall, Englewood Cliffs, N.J.
- Brownell, P. (1981), "Participation in Budgeting, Locus of Control and Organisational Effectiveness", Accounting Review, 1981, pp. 844-860.

- Brownell, P (1982), "The Role of Accounting Data in Performance Evaluation, Budgetary Participation, and Organisational Effectiveness", Journal of Accounting Research, 1982, pp. 12-27.
- Brownell, P. (1983), "Motivational Impact of Management by Exception in a Budget Context", Journal of Accounting Research, 1983, pp.456-472.
- Brownell, P. and M. Hirst (1986), "Reliance on Accounting Information, Budgetary Participation and Task Uncertainty : Tests of a Three-Way Interaction", Journal of Accounting Research, 1986, p. 241
- Brownell, P. and M.McInnes (1986) "Budgetary Participation, Motivation and Managerial Performance", Accounting Review, 1986, pp. 587-600
- Bruns, W.J. and J.H. Waterhouse (1975), "Budgetary Control and Organisation Structure", Journal of Accounting Research, Vol.13, No.2, pp. 177-203.
- Bryan, J. and E.A. Locke (1967), "Goal Setting As a Means of Increasing Motivation", Journal of Applied Psychology, 1967, pp. 274-277
- Burchell, S., C. Clubb, A. Hopwood, J. Hughes and J. Nahapiet (1980), "The Rôles of Accounting in Organisations and Society", Accounting Organisations and Society, 1980, pp.5-27.
- Carol, S. and H. Tosi (1970), "Goal Characteristics and Personality Factors in a Management by Objective Program", Administrative Science Quarterly, 1970, pp. 295-305.
- Caroll, S. and H. Tosi (1973), Management by Objectives : Applications and Research, Macmillan, New York.
- Chandler, A.D. Jr. (1966), Strategy and Structure, Doubleday and Company, New York.
- Chenhall, R. H. and P. Brownell (1988), "The Effect of Participative Budgeting on Job Satisfaction and Performance : Rôle Ambiguity as an Intervening Variable", Accounting Organisations and Society, 1988, pp.225-233.

- Cherrington, D.J. and J.O. Cherrington (1973), "Appropriate Reinforcement Contingencies in the Budgeting Process", Empirical Research in Accounting: Selected Studies, 1973, pp. 225-266.
- Cherrington, D. J., H. Joseph Reitz, and W. E. Scott (1971), "Effects of Contingent and Noncontingent Rewards on the Relationship between Satisfaction and Task Performance", Journal of Applied Psychology, 1971, pp. 531-536.
- Cohen, M.D., J.G. March and J.P. Olsen (1972), "A Garbage Can Model of Organisational Choice", Administrative Science Quarterly, March 1972, pp. 1-25.
- Cooper, D.J., D. Hayes, and F. Wolf (1981), "Accounting in Organised Anarchies: Understanding and Designing Accounting Systems in Ambiguous Situations", Accounting, Organisations and Society, 1981, pp.175-191.
- Covaleski, M.A. and M.W. Dirsmith (1986), "The Budgetary Process of Power and Politics", Accounting, Organisations and Society, 1986, pp. 193-214.
- Cyert, R. M. and J.G. March (1963), A Behavioral Theory of the Firm, Prentice-Hall, New Jersey.
- Daroca, F. (1984), "Informational Influences on Group Decision Making in a Participative Budget Setting", Accounting, Organisations and Society, 1984, pp. 13-32.
- Demski, J. (1967), "An Accounting System Structured on a Linear Programming Model", Accounting Review, 1967, pp. 701-712
- Dew, R.B. and K.P. Gee (1973), Management Control and Information, Macmillan.
- Drucker P.F. (1968), The Practice of Management, 3rd Edition, Pan.
- Drury, J.C. (1985), Management and Cost Accounting, Van Nostrand Reinhold (UK).

- Edey, H.C. (1959), Business Budgets and Accounts, Hutchinson.
- Emmanuel, C. and D.T. Otley (1985), Accounting for Management Control, Van Nostrand Reinhold (UK).
- Ezzamel M. and H. Hart (1987), Advanced Management Accounting, Cassell.
- Fayol, H. (1949), General and Industrial Management, Pitman, first published 1916
- Foran, M.F. and D.T. De Coster (1974), "An Experimental Study of the Effects of Participation, Authoritarianism and Feedback on Cognitive Dissonance in a Standard-Setting Situation", Accounting Review, October 1974, pp. 751-763.
- French J. R. P. ,E. Kay and H. H. Meyer (1966), "Participation and the Appraisal System", Human Relations, 1966, pp. 3-19
- Galbraith, J. (1973), Designing Complex Organisations, Addison -Wesley.
- Govindarajan, V, (1986), "Impact of Budgetary Participation on Managerial Attitudes and Performance : Universalistic and Contingency Approaches", Decision Sciences, 1986, pp. 496-516.
- Handy, C.B. (1985), Understanding Organisations, 3rd Edition Penguin
- Hayes, D. C. (1977), "The Contingency Theory of Management Accounting", Accounting Review, 1977, pp. 22-39.
- Heitger, L.E. and S. Matulich (1982), Managerial Accounting, McGraw Hill.
- Hickson, D.J., C.R. Hinings, C.A. Lee, R.E. Schneck and J.M. Pennings, "A Strategic Contingencies Theory of Intraorganisational Power, Administrative Science Quarterly, 1971, pp. 216-229
- Hirst, M.K. (1981), "Accounting Information and the Evaluation of Subordinate Performance : A Situational Approach", Accounting Review, 1981, pp. 771-784.

- Hirst, M.K. (1983), "Reliance on Accounting Performance Measures, Task Uncertainty and Dysfunctional Behaviour : Some extensions", Journal of Accounting Research, 1983, pp. 596-605.
- Hofstede, G.H. (1968), The Game of Budgetary Control, Tavistock.
- Hopwood, A.G. (1972), "An Empirical Study of the Role of Accounting Data in Performance Evaluation", Empirical Research in Accounting, 1972, pp. 156-193.
- Hopwood, A.G. (1973), An Accounting System and Managerial Behaviour, Saxon House.
- Horngren, C.T.(1982), Cost Accounting : A Managerial Emphasis, 5th edition, Prentice Hall, Englewood Cliffs, N.J.
- House, R.J. (1971), "A Path-Goal Theory of Leader Effectiveness", Administrative Science Quarterly, September, 1971, pp. 321-338.
- Ivancevitch, J. M. (1976), "The Effects of Goal Setting on Performance and Job Satisfaction", Journal of Applied Psychology, 1976, pp. 605-612.
- Ivancevitch, J. M. (1979), "An analysis of Participation in Decision making among Project Engineers", Academy of Management Journal, 1979, pp 253-269.
- Kennis, I. (1979), "Effects of Budgetary Goal Characteristics on Managerial Attitudes and Performance", Accounting Review, 1979, pp. 707-721.
- Killough, L.N. and W.E. Leininger (1984), Cost Accounting, West Publishing Co., St Paul, Minnesota.
- Knight, W.D. and E.H. Weinum (1964), Managerial Budgeting, Macmillan, New York.
- Kraemer H.C. (1981), "Inter-Group Concordance: Definition and Estimation", Biometrika, 1981, pp. 641-646

- Licata, M.P., R.H. Stawser and R.B. Welker (1986), "A Note on Participation in Budgeting and Locus of Control", Accounting Review, 1986, pp112-117.
- Likert, R. (1967), The Human Organisation, McGraw Hill.
- Locke, E. A.(1968),"Towards a Theory of Task Motivation and Incentives", Organisational Behaviour and Human Performance, 1968, pp157-189
- Locke, E.A. and J. Bryan (1966), "Cognitive Aspects of psychomotor performance: The Effects of Performance Goals on Level of Performance", Journal of Applied Psychology, 1966, pp. 286-291
- Lock, E. A. and J. Bryan (1967), "The Effects of Goal Setting, Rule-Learning and Knowledge of Score on Performance", American Journal of Psychology, 1967, pp. 451-457.
- Lowe, E.A. and R.W. Shaw (1968), "An Analysis of Managerial Biasing : Evidence from a Company's Budgeting Process", Journal of Management Studies, 1968, pp. 304-315.
- Lowe, E.A. and R.S. Shaw (1970), "The Accuracy of Short-term Business Forecasting : an Analysis of a Firm's Sales Budgeting", Journal of Industrial Economics, Vol.18, pp. 276-289.
- Lukka, K. (1988), "Budgetary Biasing in Organisations : Theoretical Framework and Empirical Evidence", Accounting, Organisation and Society, 1988, pp.281-301.
- Merchant, K. (1981), "The Design of Corporate Budgeting Systems : Influences on Managerial Behaviour and Performance", Accounting Review, 1981, pp. 813-829.
- Merchant, K. (1984), "Influences on Departmental Budgeting : an Empirical Examination of a Contingency Model", Accounting, Organisations and Society, 1984, pp. 291-310.
- Merchant, K. (1985a), "Budgeting and the Propensity to Create Budget Slack", Accounting, Organisations and Society, Vol.10, pp. 201-210.

Merchant, K. (1985b), Control in Business Organisations, Pitman, Boston.

Meyer, H. H., E. Kay, and J. R. P. French (1965), "Split Rôles in Performance Appraisal", Harvard Business Review, January 1965, pp.123-129.

Mia, L. (1987), "Participation in Budgetary Decision Making, Task Difficulty, Locus of Control and Employee Behaviour - An Empirical Study", Decision Sciences, 1987, pp. 547-561

Mia, L. (1988), "Managerial Attitudes, Motivation and the Effectiveness of Budget Participation", Accounting, Organisations and Society, 1988, pp. 465-475.

Milani, K. (1975), "The Relationship of Participation in Budget Setting to Industrial Supervisor Performance and Attitudes : A Field Study", Accounting Review, 1975, pp. 274-283.

Mintzberg, H. (1979), The Structuring of Mintzberg, Prentice-Hall, Englewood Cliffs, N.J.

Moriarty, S. and C.P. Allen (1984), Cost Accounting, Harper Row, New York.

Murray, W. (1970), Management Controls in Action, Irish Productivity Committee, Dublin

Onsi, M. (1973), "Factor Analysis of Behavioural Variables Affecting Budgetary Slack", Accounting Review, 1973, pp. 535-548.

Otley, D.T. (1977), Behavioural Aspects of Budgeting : Accountants Digest No. 49, ICAEW.

Otley, D.T. (1978), "Budget Use and Managerial Performance", Journal of Accounting Research, 1978, pp. 122-149.

Otley, D. T. (1980), "The Contingency Theory of Management Accounting : Achievement and Prognosis", Accounting, Organisations and Society, 1980, pp. 413 428.

- Otley, D. T. (1985), "The Accuracy of Budgetary Estimates: Some Statistical Evidence", Journal of Business Finance and Accounting, 1985, pp. 415-428.
- Otley, D.T. and A. Berry (1979), "Risk Distribution in the Budgetary Process", Accounting and Business Research, Vol.9, pp. 325-337.
- Parker, L.D. (1978), "Communication in the Corporate Budgeting System", Accounting and Business Research, Vol.8, p. 191.
- Parker, L.D. (1979), "Participation in Budget Planning : the Prospects Surveyed", Accounting and Business Research, Vol.9, pp. 325-337.
- Perrin, J.R. (1958), Budgetary Planning and Control Systems, Ph.D Thesis, University of London.
- Ronen, J. and J.L. Livingstone (1975), "An Expectancy Theory Approach to the Motivational Impact of Budgets", Accounting Review, Vol. 50, No. 4, pp. 671-685.
- Samuelson, L.A. (1986), "Discrepancies between the Rôles of Budgeting", Accounting, Organisations and Society, 1986, pp. 35-45.
- Scapens, R.W. (1984), "Management Accounting - A Survey", in Scapens, R.W., D.T. Otley and R. Lister, Management Accounting, Organisation Theory and Capital Budgeting : Three Surveys, Macmillan.
- Schiff, M. and A.Y. Lewin (1970), "The Impact of People on Budgets", Accounting Review, pp. 259-268.
- Searfoss, D. G. (1976), "Some Behavioural Aspects of Budgeting for Control : an Empirical Study", Accounting Organisations and Society, 1976, pp. 375-385.
- Searfoss, R.G. and R.M. Monczha (1973), "Perceived Participation in the Budget Process and Motivation to Achieve the Budget", Academy of Management Journal, pp. 541-553.

- Seiler R.E. and R.W. Bartlett (1982) "Personality Variables as Predictors of Budget System Characteristics", Accounting, Organisations and Society, 1982, pp.381-403.
- Shillinglaw, G.A. (1982), Managerial Cost Accounting, 5th edition, Richard D. Irwin, Homewood, Illinois.
- Simon, H.A. (1957), "The Behavioural Model of Rational Choice", Quarterly Journal of Economics, 1957, pp. 99-118.
- Sizer, J. and N. Coulthurst (1984), A Casebook of British Management Accounting, Vol.1, ICAEW.
- Snell, M.C. (1983), "Recent Literature on Testing for Inter-Group Concordance", Journal of the Royal Statistical Society Series, C Vol.32, No.2, pp.134-140.
- Sord, B.H. and G.A. Welsch (1958), Business Budgeting, A Survey of Management Planning and Control Practices, Controllershship Foundation, New York.
- Stedry, A.C. (1960), Budget Controls and Cost Behaviour, Prentice-Hall, Englewood Cliffs, N.J.
- Stedry, A. C. and E. Kay (1964), "The Effects of Goal Difficulty on Performance", Behavioural Science, 1966, pp. 459-470.
- Steers, R. (1976), "Factors Affecting Job Attitudes in a Goal Setting Environment", Academy of Management Journal, March 1976, pp. 6-16.
- Swieringa, R.J. and R.H. Moncur (1972), "The Relationship between Managers' Budget Oriented Behaviour and Selected Attitude, Position, Size and Performance Measures", Empirical Research in Accounting, 1972,
- Swieringa, R.J. and R.H. Moncur (1975), Some Effects of Participative Budgeting on Managerial Behaviour, National Association of Accountants, New York.

- Taylor, F.W. (1947), Scientific Management, Harper, New York (first published 1911).
- Thompson, J.D. and A Tuden (1959), "Strategies Structures and Processes of Organisational Decision", in J.D.Thompson et al (eds), University of Pittsburgh Press.
- Thompson, P. H. and G. W. Dalton (1970), "Performance Appraisal : Managers Beware", Harvard Business Review, January 1970, pp.149-157.
- Tiessen,P. and Waterhouse J.H. (1983), "Towards a Descriptive Theory of Management Accounting", Accounting, Organisations and Society, 1983, pp. 251-167.
- Tosi, H. (1975), "The Human Effects of Managerial Budgeting Systems", in Livingstone, J.L. (ed), Management Accounting : The Behavioural Foundations, Grid, Columbus, Ohio.
- Turcotte, W. E.(1974),"Control Systems, Performance and Satisfaction in Two State Agencies",Administrative Science Quarterly, March 1974, pp 60-74.
- Vroom, V.H. (1959), "Some Personality Determinants of the Effects of Participation", Journal of Applied Psychology, 1959, pp. 322-327.
- Vroom, V.H. (1960), Some Personality Determinants of the Effects of Participation, Prentice-Hall, Englewood Cliffs, N.J.
- Vroom, V.H. (1964), Work and Motivation, John Willey, New York.
- Wald, J. (1984), Bigg's Cost Accounts, Pitman.
- Walker, M. and N. Choudhury (1987), "Agency Theory and Management Accounting", in Arnold, J.A., R. Scapens and D.Cooper, Management Accounting: Expanding the Horizons, C.I.M.A., pp.61-122.
- Waller, W. (1988), "Slack in Participative Budgeting : The Joint Effect of a Truth Inducing Pay Scheme and Risk Preferences ", Accounting Organisation and Society, 1988, pp.87-98.

- Waterhouse, J.H. and P. Tiessen (1978), "A Contingency Framework for Management Accounting System Research", Accounting Organisations and Society, 1978. pp. 65-76
- Welsch, G.A. (1976), Budgeting : Profit Planning and Control, Prentice-Hall, Englewood Cliffs, N.J.
- Wildavsky, A. (1975) A Comparative Theory of Budgetary Processes, Little Brown, Boston.
- Williamson, O. E. (1964), The Economics of Discretionary Behavior : Managerial Objectives in a Theory of the Firm, Prentice-Hall, Englewood Cliffs, N.J.
- Williamson, O.E. (1975), Markets and Hierarchies: Analysis and Antitrust Implications, Free Press, New York.
- Yates, F. (1984), "Tests of Significance for a 2 x 2 Contingency Table", Journal of the Royal Statistical Society, Vol.147, Part 3, pp. 426-449.
- Young, S. Mark (1985), "Participative Budgeting : The Effects of Asymmetric Information on Budgetary Slack", Journal of Accounting Research, 1985, p. 829.